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Shaw® Shaw Environmental, Inc.

November 15, 2005

Mr. Jay Chen, PE
Public Facilities Branch
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765

RE: Bradley Landfill and Recycling Center, Facility ID No. 050310
Rule 1150.1 Third Quarter 2005 Sampling and Analytical Report

Dear Mr. Chen:

Enclosed on behalf of the Bradley Landfill and Recycling Center (BLRC) are the results of third quarter 2005 monitoring activities conducted pursuant to the Rule 1150.1 Compliance Plan for Bradley Landfill, adopted by the South Coast Air Quality Management District on February 18, 1993 and amended on June 19, 2002. The monitoring activities, which included instantaneous and integrated landfill surface monitoring, ambient air sampling, and perimeter probe monitoring/sampling, were conducted in accordance with BLRC's Rule 1150.1 Compliance Plan.

Responsibility for the management of the landfill gas system at BLRC is contracted with Shaw Environmental, Inc. (Shaw). Shaw has responsibility for the operation and maintenance of the landfill gas collection system and landfill gas processing facility. Shaw's responsibilities include monitoring and sampling landfill gas in perimeter probes, at the surface of the landfill, and at the flare stations to comply with Rule 1150.1.

If you have any questions or need additional information regarding this matter, please call me at (818) 551-6508.

Sincerely,

Andrew Washington for
Sr. Air Quality Engineer
Shaw Environmental, Inc.

Enclosure

Cc: Doug Corcoran, WMI
Paul Willman, WMI

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1150.1

THIRD QUARTER 2005 MONITORING REPORT BRADLEY LANDFILL AND RECYCLING CENTER SUN VALLEY, CALIFORNIA

Prepared for

Waste Management of California, Inc.

Bradley Landfill and Recycling Center

November 14, 2005

Prepared by

Shaw Environmental, Inc.
3452 East Foothill Boulevard, 9th Floor
Pasadena, California 91107

Shaw Project No.: 108341.08000000

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Abbreviations

CARB	California Air Resources Board
FID	Flame Ionization Detector
GEM-500	CES-LANDTEC Gas Extraction Monitor
LFG	Landfill Gas
OVA	Organic Vapor Analyzer
PPB	Parts per Billion
PPM	Parts per Million
SCAQMD	South Coast Air Quality Management District
TGNMO	Total Gaseous Non-methane Organic Compounds
TOC	Total Organic Compounds

1 EXECUTIVE SUMMARY

This third quarter report for the year 2005 summarizes the monitoring and sampling results at the Bradley Landfill and Recycling Center (BLRC) for compliance with South Coast Air Quality Management District (SCAQMD) Rule 1150.1(f)(2)(B) and pursuant to the conditions set forth in the Alternative Rule 1150.1 Compliance Plan (SCAQMD A/N 394147) approved by SCAQMD on June 19, 2002. The Compliance Plan is found in Appendix A.

1.1 Site Description and Background

The Bradley Landfill and Recycling Center (BLRC) is located in the Sun Valley District of Los Angeles, California, in the northwest portion of the Los Angeles metropolitan area. The landfill is owned and operated by Waste Management Recycling and Disposal Services of California, Inc. (WMRDSC, formerly Valley Reclamation Company). The site was previously utilized as a sand and gravel pit by Conrock Company. Waste Management of Los Angeles Hauling Company also operates on the BLRC property. The landfill is a Class III waste disposal facility occupying approximately 209 acres. A site map containing the current landfill boundary and locations of landfill gas (LFG) extraction wells is presented as Figure 1.

An active LFG migration/emissions control system has been in operation at the site since 1982. During normal operation, the higher BTU value LFG is processed through the gas treatment plant and delivered to one (1) on-site and one (1) offsite LFG-to-energy facility. Stewart and Stevenson (S&S) currently operates the on-site facility under contract by Waste Management, Inc. The off-site facility is owned by Penrose Landfill Gas Conversion, LLC. The on-site facility operated by S&S was placed into service on March 3, 2003. The lower BTU value gas (under 500 BTU/cf) collected from the Bradley east and the Bradley west perimeter is disposed of through the BLRC flare stations. When the higher BTU value LFG is not in demand by either of the LFG-to-energy facilities, the gas is routed to one of the on-site flare stations where it is combusted in accordance with SCAQMD rules and permit conditions.

1.2 Gas Collection and Control System

The BLRC LFG collection and control system (GCCS) consists of three (3) LFG flares, one LFG compressor, vertical extraction wells, header and subheader piping, and a condensate injection system. The LFG collection series consist of header collection pipes, laterals, vertical extraction wells and horizontal collectors. Presently, the system has 123 vertical dual completion wells and 77 single completion vertical wells for a total of 200 wells. In addition, the system has 7 horizontal collectors.

Condensate currently drains by gravity to 15 collection sumps where it is pumped to the LFG treatment plant for processing. Condensate processing consists of hydrocarbon separation, condensate injection into the flares, and pH adjustment for discharge to the City of Los Angeles sanitary sewer system. As the hydrocarbon phase is accumulated, it is transferred to the larger hydrocarbon storage tank where it accumulates until transported off-site in accordance with all applicable regulations.

1.3 Monitoring and Sampling Activities Summary

Field activities performed by Shaw Environmental, Inc. (Shaw) during this quarter included:

- Monthly subsurface perimeter probe monitoring (as required by the Local Enforcement Agency)
- Quarterly integrated surface emission monitoring and sampling for laboratory analysis
- Quarterly instantaneous surface emission monitoring
- Quarterly flare inlet LFG sampling for laboratory analysis
- Quarterly ambient air monitoring (24-hour)
- SCAQMD Rule 431.1 Sulfur Monitoring

AtmAA, Inc. performed the laboratory analysis for two (2) integrated surface emission samples, a gas compressor LFG sample, flare inlet LFG samples, ambient air sample(s), and monthly perimeter probe samples from the probes with the highest field-obtained TOC as methane concentration. The integrated surface samples were analyzed for toxic air contaminants (Toxic Air Contaminants--Core Group, Guidelines for Implementation of Rule 1150.1, Table 1), methane, and total gaseous non-methane organic compounds (TGNMOs) as stipulated by SCAQMD's Rule 1150.1. The flare inlet LFG samples were analyzed for the concentration of fixed gases, hydrogen sulfide, and toxic air

contaminants. The ambient air samples were analyzed for toxic air contaminants, methane, and total gaseous non-methane organic compounds (TGNMOs). Toxic air contaminants were analyzed by gas chromatograph/mass spectrometry consistent with Environmental Protection Agency (EPA) Method TO-15. Fixed gases were analyzed by gas chromatograph/thermal conductivity detector using EPA Method 3C Modified. Total gaseous non-methane organics (TGNMOs) were analyzed using modified EPA Method 25C with gas chromatograph/flame ionization detection/total combustion analysis. A gas chromatograph/sulfur chemiluminescence detector was used to analyze for hydrogen sulfide per SCAQMD Rule 431.1 and the Rule 431.1 Alternative Monitoring Plan (A/N 267044), and analyzed using SCAQMD Method 307-91.

1.3.1 Subsurface Perimeter Probe Monitoring §1150.1(e)(1)

Monthly subsurface perimeter probe monitoring was performed using a Landtec GEM-2000 LFG monitor during the quarter. Perimeter probes were monitored for percent methane by volume in air.

Alternative monitoring procedures are used in the area of perimeter probe E-8D, including monitoring of the probe and performing surface emission monitoring of Grid 31-D, as specified in the Rule 1150.1 Compliance Plan for Bradley Landfill. These alternative monitoring procedures are implemented when TOC as methane concentrations meet or exceed five (5) percent by volume, measured as methane. Field and laboratory data from subsurface perimeter probe monitoring and laboratory TOC concentrations as methane are discussed in Section 2.2 and presented in Appendix B. Samples from the probes with the highest field-obtained TOC as methane concentrations are sent to AtmAA Inc. for laboratory analysis. Methane was detected at over 5% in Probe W-14S during the August 2005 monthly probe monitoring event. However, with multiple rounds of hydrocarbon speciation, carbon-14 dating, and further supported by documented naturally occurring deposits of thermogenic gas, the gas in Probe W-14S was determined not to be landfill gas. Waste Management (WM) was granted a variance under Case No. 3824-8 for this probe by SCAQMD and requested replacement of Probes W-14S and W-14M with Probes W-14S-R and W-14M-R in the site specific 1150.1 Compliance Plan. Probes W-14SR and W-14MR were installed as replacements to W-14S and W-14M in July 2005. The SCAQMD approved WM's request and Probes W-14S and W14M were abandoned on August 31, 2005.

1.3.2 Integrated Surface Emission Monitoring §1150.1(e)(2)

The TOC as methane concentration collected from each grid is listed in Table 3-1, Integrated Surface Sampling Field Summary. Field data sheets are presented in Appendix C. All of the integrated TOC as methane readings were within compliance limits, as set forth by SCAQMD Rule 1150.1. Typically, the two samples having the highest field

TOC as methane concentrations are sent to the laboratory for further analysis. The TOC as methane background reading was 5.0 ppm. During surface emissions monitoring, TOC as methane concentrations above background were no more than 15 ppm. Samples from Grids 3 and 6 were selected for laboratory analysis.

RES Environmental obtained samples from Grids 3 and 6 and submitted them for laboratory analysis for methane, TGNMOs, and Toxic Air Contaminants.

Laboratory analysis of the samples collected from Grid 3 detected low-level concentrations (less than 5 parts per billion [ppb]) of the following constituents: benzene, carbon tetrachloride, toluene, and xylenes. Laboratory analysis of the samples collected from Grid 3 detected concentrations of methane at 17.1 parts per million [ppm]. Laboratory analysis of the samples collected from Grid 3 detected low-level concentrations (less than 5 ppm) of TGNMO.

Laboratory analysis of the samples collected from Grid 6 detected low-level concentrations (less than 5 ppb) of the following constituents: benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. Laboratory analysis of the samples collected from Grid 6 detected concentrations of methane at 10.8 ppm. Laboratory analysis of the samples collected from Grid 6 detected low-level concentrations of TGNMO (less 5 ppm) of methane. The laboratory reports are presented in Appendix C.

1.3.3 Instantaneous Surface Emission Monitoring §1150.1(e)(3)

Instantaneous surface emission monitoring was conducted on July 27, August 30, and September 21, 2005, and consisted of monitoring the landfill surface for the presence of LFG emissions. Total organic compound (TOC) measurements (measured in ppm as methane) were recorded in accordance with procedures described in the SCAQMD Guidelines for Implementation of Rule 1150.1. Areas of the landfill where TOC as methane concentrations were greater than 500 ppm TOC as methane were remonitored within 10 calendar days of the original detection. Instantaneous surface emission monitoring field data are presented in Appendix D.

In July 2005, instantaneous monitoring of Grids 2 through 5, 87, 88, 115, 127, 131, and 132 had detected concentrations ranging from 1,000 to 100,000 ppm TOC as methane. These grids were repaired on July 27, 2005 and 10-day remonitoring occurred on August 4, 2005. The remonitored concentrations for all of these grids measured less than 500 ppm TOC as methane.

In August 2005, instantaneous monitoring of Grids 1, 2, 4, 5, 6, 49, 61, 76, 84, 87, 88, 89, 111, and 112 had detected concentrations ranging from 1,000 to 100,000 ppm TOC as methane. These grids were repaired on August 30, 2005 and remonitoring was performed at Grids 4, 5, 6, 49, 76, 84, 87, 88, and 89 on September 1, 2005. Remonitoring results

for these grids ranged from 5 to 60 ppm. Grids 1,2, 61, 111, and 112 were remonitored on September 9, 2005 and remonitoring results ranged from 5 to 200 ppm.

In September 2005, instantaneous monitoring of Grids 1, 2, 4, 6, 80, 87, 88, 89, 105 and 112 detected concentrations of ranging from 1,000 to 100,000 ppm TOC as methane. Each of these grids were repaired on September 21, 2005 and 10-day remonitoring was performed on Grids 80, 87, and 105 on September 23, 2005. Grids 6 and 88 were remonitored on September 26, 2005 and Grids 1, 2, 4, and 112 were remonitored on October 3, 2005. Remonitored concentrations for all grids measured below 500 ppm.

Additional discussion pertaining to the grids is discussed in Section 4.2.

1.3.4 Landfill Gas Chemical Analysis §1150.1(e)(4)

LFG samples were collected from each of the three LFG flaring systems on August 30, 2005 and were analyzed for fixed gases, TGNMOs, toxic air contaminants, and hydrogen sulfide. Results are discussed in Section 5.2 and provided in Appendix E.

1.3.5 Ambient Air Monitoring (24-hour) §1150.1(e)(5)

Four ambient air samplers were used to collect upwind (south) and downwind (north) samples on July 17 and 18, 2005. Two ambient air samplers were positioned upwind at the landfill property boundary and two downwind at the landfill property boundary (Figure 1). Low concentrations of benzene, carbon tetrachloride, toluene, xylenes, methane, and TGNMOs were detected in all four air samples, and a low concentration of dichloromethane was detected in two of the four air samples (AA-1 and AA-3). The results are discussed in Section 6.2, and field and laboratory data from ambient air monitoring are included in Appendix F.

1.3.6 SCAQMD Rule 431.1 Sulfur Monitoring

Monitoring for total reduced sulfur compounds (TRS) was conducted in accordance with the tiered methodology described in the Alternative Monitoring Plan for SCAQMD Rule 431.1, Bradley Landfill, dated April 1, 2003 (A/N 267044). The table below presents the tiered approach, which includes monitoring with colorimetric tubes and the collection of a ten-liter bag sample in a Tedlar bag from each LFG flare and gas plant inlet location. The Bradley Landfill is currently designated with a Tier I Action level.

Action Level	AQMD Modified Tiers	Sampling Requirement
Tier I	TS < 100 ppm	-Quarterly using Method 307-91 -Monthly using TUBE

Action Level	AQMD Modified Tiers	Sampling Requirement
Tier II	100 ppm ≤ TS <120 ppm	-Monthly using Method 307-91 -Weekly using TUBE
Tier III	120 ppm < TS <130 ppm	-Weekly using Method 307-91 -Daily using TUBE
Tier IV	TS > 130 ppm	-Potential Rule 431.1 Violation -Inform AQMD immediately following R430 Breakdown Provisions -Daily using Method 307-91

Collected samples are analyzed within 24 hours in accordance with SCAQMD Method 307-91. A detailed discussion of the sulfur content is discussed in Section 5.2.

Monthly H_2S sampling with a colorimetric tube was conducted on July 22, August 22, and September 24, 2005. Quarterly H_2S sampling using Method 307-91 was conducted on August 30, 2005. Samples were collected in 10-liter tedlar bags and were sent to AtmAA, Inc. for testing as required by Rule 431.1. Sulfur monitoring results are summarized below. Analytical results are presented in Appendix E.

Table 1-1
Sulfur Monitoring Results

Date	Compressor (Gas Sales)	Flare 1 H_2S concentration (ppmv)	Flare 2 H_2S concentration (ppmv)	Flare 3 H_2S concentration (ppmv)
Colorimetric Tube Results				
7/22/05	58	60	40	40
8/22/05	65	60	40	40
9/24/05	55	40	35	20
Laboratory Results				
8/30/05	34.6	36.0	25.9	29.7

1.3.7 Recent Landfill Activity

Landfill operations limited integrated and instantaneous surface emission monitoring in some areas of the landfill. Active filling areas where monitoring could not be conducted are shown on Figure 1. In July 2005, the active filling location was Grid 61. Active filling locations in August 2005 were Grids 106, 110, 115, 117, 120, 121, 122, 125, and 126. In September 2005, active filling locations were Grids 119 through 122, 125, and 126.

2 SUBSURFACE PERIMETER PROBE MONITORING §1150.1(e)(1)

2.1 Subsurface Perimeter Probe Monitoring Protocol

Subsurface perimeter probe monitoring was performed in July, August, and September 2005. Monthly gas samples are collected from perimeter probes yielding the highest field-obtained TOC concentrations in percent by volume, measured as methane. Locations of the subsurface perimeter monitoring probes are shown on Figure 1, Surface Emissions Monitoring Site Plan.

Alternative monitoring procedures were used in the area of perimeter probe E-8D. These procedures include monitoring of the probes and performing surface emission monitoring of Grid 31-D, as specified in the Rule 1150.1 Compliance Plan for Bradley Landfill. The alternative procedures are implemented when TOC concentrations meet or exceed five (5) percent by volume, measured as methane.

Static pressure, in inches of water column, was measured prior to evacuating each probe. Probes were evacuated at a continuous rate until a stable methane concentration was observed. During the third quarter of 2005, a calibrated GEM-2000 Gas Extraction Monitor was used to measure methane by percent volume, methane by percent of LEL, oxygen by percent volume, carbon dioxide by percent volume, balance gas (nitrogen) by percent volume and static pressure in inches of water column.

2.2 Subsurface Perimeter Probe Monitoring Results

Perimeter probes with the highest field-obtained TOC concentrations, taken, during the monthly monitoring event for each month, were selected to be sampled for laboratory analysis of TOC as methane. During the monthly probe monitoring events, field readings were taken on July 25 and 27, August 29, and September 19, 2005 for all probes. On July 27, 2005, methane was detected in Probe E-8D at 43.6 percent. On August 29, 2005, methane was detected in Probes E-8D and W-14S at 51.0 and 23.1 percent, respectively. On September 19, 2005, methane was detected in Probe E-8D at 56.5 percent. Tedlar bag samples were collected from all probes where methane was detected over 5% during the July, August, and September monthly monitoring events. Although methane was not detected in Probe W-14S during the July monthly monitoring event, based on methane concentrations detected above 5% from past monitoring events, a sample was still collected from Probe W-14S on July 25, 2005 and sent to AtmAA for analysis. Laboratory analysis of gas from Probe E-8D yields more consistent TOC as methane

concentrations than readings taken with the GEM 2000. The third quarter 2005 laboratory bag samples collected on July 25, August 29, and September 20, 2005 from Probe E-8D contained concentrations of 52.8, 46.7, and 46.8 percent TOC as methane, respectively, as reported by the laboratory. Field and laboratory data for perimeter probe monitoring are provided in Appendix B.

Perimeter probes that were selected to be sampled, during the monthly monitoring event, based on the highest field-obtained TOC as methane concentrations for each month are listed below:

Table 2-1
Perimeter Probe Sampling Results

Month	Probe #	Field TOC as methane Concentration (%)	Lab TOC as Methane Concentration (%)
July-05	E-8D	43.6	52.8
	W-14S	0.0	<0.1
August-05	E-8D	51.0	46.7
	W-14S	23.1	NS
September-05	E-8D	56.5	46.8

NS=Not sampled

The gas in Probe W-14S was determined not to be landfill gas based on multiple rounds of hydrocarbon speciation, carbon 14 dating, and further supported by documented naturally occurring deposits of thermogenic gas. Waste Management was granted a variance for Probe W-14S by the SCAQMD and requested replacement of this probe and neighboring Probe W-14M with Probes W-14SR and W-14MR respectively, in the site specific 1150.1 Compliance Plan. A sample was not taken from Probe W-14S during the August monthly monitoring event due to approval from the SCAQMD to replace and abandon this probe. Probes W-14S R and W-14MR were installed in July 2005. Probes W-14S and W-14M were abandoned on August 31, 2005. No methane was detected in the replacement probes, W-14SR and W-14MR during the August and September probe monitoring events.

3 INTEGRATED SURFACE EMISSION SAMPLING §1150.1(e)(2)

3.1 Integrated Surface Emission Sampling Protocol

The third quarter 2005 integrated surface emission monitoring and sampling was conducted on August 16 and 17, 2005. Monitoring and sampling were conducted consistent with SCAQMD's Guidelines for Implementation of Rule 1150.1.

Prior to sampling, the landfill surface was divided into approximate 50,000 square-foot grids with the majority of the grids having dimensions 100 feet by 500 feet. Figure 3, Integrated Surface Grids Location Map, shows the location of each grid.

Integrated surface sampling (ISS) equipment, field protocol, and QA procedures used in this program were derived from the SCAQMD Guidelines for Implementation of Rule 1150.1, in accordance with the compliance plan for the landfill. RES Environmental, Inc. (RES) technicians sampled each grid using the walk pattern and collection rate specified in the guidelines. Each portable Integrated Sampler is comprised of a Tedlar bag, DC pump, and a calibrated flow controller. Each bag sampler is calibrated by a film (bubble meter) calibration method. Each Tedlar bag sample was purged three times with ultra-pure nitrogen before sampling and enclosed in a light-sealed box after sampling. Analyses were performed within 72 hours after sampling was conducted. Tedlar bag QA/QC checklist is in Appendix G.

Wind monitoring data recorded at the on-site wind station were reduced to calculate 10-minute average wind speeds for those times when sampling was performed. Each integrated grid sample was collected over a continuous 25-minute period.

RES technicians walked grids at approximate 25-foot intervals for a total of 2,600 linear feet in a period of 25 minutes. The integrated sampler wand was extended to no greater than one inch above the landfill surface. Integrated surface samples were collected at an approximate rate of 333 cubic centimeters per minute (cc/min). The technicians recorded the starting and ending time of each grid traverse, along with the average rotameter flow rate and the prevailing wind speed and direction. An OVA was used to measure the TOC concentration (in ppm, as methane) from each of the 10-liter bag samples collected from the pre-numbered grids.

The landfill sampling grids are divided into Types A, B, and C. All grid types are sampled quarterly. Type A surface grids have no exclusions from sampling, and sampling is conducted in accordance with Rule 1150.1. Type B surface grids contain steep slopes or steep slopes and dense vegetation. Sampling of Type B grids consists of sampling the toe and top of 128 and 130. Grids 121 and 122, each defined as a Type "B" Grid, have been re-designated as Type "A" Grids due to the additional refuse that has been put in place. Vacuum readings from all LFG extraction

wells located within Type B grids are recorded monthly and included in the quarterly report. Type C grids are located in the area of active recycling operations. Sampling of Type C surface grids are performed quarterly, during the integrated sampling event. Sampling of Type C surface grids consists of sampling a course of 2,600 linear feet but not less than 1,900 linear feet in each grid for a continuous 25-minute period, excluding stockpiles, stored equipment and recycling equipment. Vacuum readings from all gas extraction wells located within Type C active recycling grids are recorded monthly and included in the quarterly report. Vacuum readings recorded in the third quarter from the extraction wells located in Type B and C Grids are presented in Table 3-3.

Tedlar bag samples from Grids 3 and 6 were sent to AtmAA, Inc. for further analysis of toxic air contaminants, methane, and TGNMOs. Technicians responsible for transporting the integrated samples recorded pertinent information on a chain-of custody form included in Appendix C, Integrated Surface Emission Sampling. Additional personnel, including lab technicians, also recorded their signatures on the chain-of-custody form.

Integrated surface samples were collected when the average wind speed was less than five miles per hour and the instantaneous wind speed was less than ten miles per hour. Integrated samples were not collected within 72 hours of a rainstorm. Wind speed and direction measurements are tracked on the chart included in Appendix C, Integrated Surface Emission Sampling. Other weather data taken during integrated monitoring can also be found in Appendix C.

3.2 Integrated Surface Monitoring Results

The TOC as methane concentration collected from each grid is listed in Table 3-1, Integrated Surface Sampling Field Summary. Field data sheets are presented in Appendix C. All of the integrated TOC as methane readings were within compliance limits, as set forth by SCAQMD Rule 1150.1. Typically, the two samples having the highest field TOC as methane concentrations are sent to the laboratory for further analysis. The TOC as methane background reading was 5.0 ppm. During surface emissions monitoring, TOC as methane concentrations above background were no more than 15 ppm. Samples from Grids 3 and 6 were selected for laboratory analysis.

3.3 Integrated Surface Sampling Laboratory Results

Integrated samples were collected from Grids 3 and 6 and were transported to AtmAA, Inc. on August 17, 2005 for further analysis. Table 3-2, Integrated Surface Sampling, Laboratory Summary, lists the laboratory analysis methods and results.

Laboratory analysis by Method TO-15 of the sample from Grid 3 (Lab Sample ID 02305-11) detected benzene, carbon tetrachloride, toluene, and xylenes. The TGNMO concentration was 1.76 ppmv and the methane concentration was 17.1 ppmv.

Laboratory analysis by Method TO-15 of the sample from Grid 6 (Lab Sample ID 02305-10) detected benzene, dichloromethane, carbon tetrachloride, toluene, and xylenes. The TGNMO concentration was 1.98 ppmv and the methane concentration was 10.3 ppmv.

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT OVA 128/88
88-ISS Packs

DATE OF SAMPLING: 8/16/05 & 8/17/05
TECHNICIAN: RES Environmental Inc.

Grid I.D.	TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv)	Sample Date	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
1	0	8/16/2005	NA			
2	3	8/16/2005	NA			
3	15	8/16/2005	NA			
4	3	8/16/2005	NA			
5	0	8/16/2005	NA			
6	10	8/16/2005	NA			
7	0	8/17/2005	NA			
8	0	8/17/2005	NA			
9	1	8/17/2005	NA			
10	0	8/17/2005	NA			
20	0	8/16/2005	NA			
21	3	8/16/2005	NA			
22	3	8/16/2005	NA			
23	5	8/16/2005	NA			
24	0	8/16/2005	NA			
31	0	8/17/2005	NA			
32	3	8/16/2005	NA			
33	3	8/16/2005	NA			
34	5	8/16/2005	NA			
35	0	8/16/2005	NA			
36	0	8/16/2005	NA			
37	5	8/16/2005	NA			
38	0	8/16/2005	NA			
39	3	8/16/2005	NA			
40	0	8/16/2005	NA			
41	5	8/16/2005	NA			
42	3	8/16/2005	NA			
43	0	8/16/2005	NA			
44	3	8/16/2005	NA			
45	3	8/16/2005	NA			
46	3	8/16/2005	NA			
47	0	8/16/2005	NA			
48	0	8/16/2005	NA			
49	0	8/16/2005	NA			
50	0	8/16/2005	NA			
51	0	8/16/2005	NA			
52	0	8/16/2005	NA			
53	5	8/16/2005	NA			
54	0	8/16/2005	NA			
55	0	8/16/2005	NA			
56	0	8/16/2005	NA			
57	0	8/16/2005	NA			
58	3	8/16/2005	NA			
59	0	8/16/2005	NA			
60	0	8/16/2005	NA			
61	0	8/16/2005	NA			
62	0	8/17/2005	NA			
63	0	8/17/2005	NA			
64	0	8/16/2005	NA			
65	3	8/16/2005	NA			
67	1	8/16/2005	NA			
68	0	8/16/2005	NA			
69	0	8/16/2005	NA			
70	0	8/16/2005	NA			

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT OVA 128/88
88-ISS Packs

DATE OF SAMPLING: 8/16/05 & 8/17/05
TECHNICIAN: RES Environmental Inc.

Grid I.D.	TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv)	Sample Date	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
71	3	8/16/2005	NA			
72	0	8/16/2005	NA			
74	0	8/17/2005	NA			
75	0	8/16/2005	NA			
76	0	8/16/2005	NA			
77	0	8/16/2005	NA			
78	1	8/16/2005	NA			
79	0	8/16/2005	NA			
80	0	8/16/2005	NA			
82	0	8/16/2005	NA			
83	0	8/16/2005	NA			
86	0	8/16/2005	NA			
87	0	8/16/2005	NA			
88	0	8/16/2005	NA			
89	0	8/16/2005	NA			
91	0	8/17/2005	NA			
92	0	8/17/2005	NA			
93	3	8/16/2005	NA			
94	0	8/16/2005	NA			
95	0	8/16/2005	NA			
97	0	8/16/2005	NA			
98	0	8/16/2005	NA			
100	0	8/17/2005	NA			
101	0	8/16/2005	NA			
102	0	8/16/2005	NA			
104	0	8/16/2005	N/A			
105	0	8/16/2005	N/A			
107	3	8/16/2005	NA			
108	0	8/16/2005	N/A			
109	0	8/16/2005	NA			
110	0	8/16/2005	NA			
111	0	8/16/2005	NA			
112	0	8/16/2005	NA			
113	0	8/16/2005	NA			
114	1	8/16/2005	NA			
115	1	8/16/2005	NA			
116	0	8/16/2005	NA			
117	2	8/17/2005	NA			
118	0	8/17/2005	NA			
119	0	8/17/2005	NA			
120	0	8/17/2005	NA			
121	0	8/17/2005	NA			
122	2	8/17/2005	NA			
123	0	8/17/2005	NA			
124	0	8/17/2005	NA			
125	0	8/17/2005	NA			
126	3	8/17/2005	NA			
127	3	8/17/2005	NA			
128	0	8/17/2005	NA			
129	0	8/17/2005	NA			
130	0	8/17/2005	NA			
131	3	8/17/2005	NA			
132	0	8/17/2005	NA			

Table 3-1
Integrated Surface Sampling, Field Summary
Bradley Landfill and Recycling Center
Sun Valley, California

INSTRUMENT OVA 128/88
88-ISS Packs

DATE OF SAMPLING: 8/16/05 & 8/17/05
TECHNICIAN: RES Environmental Inc.

Grid I.D.	TOC CONCENTRATION ABOVE BACKGROUND LEVELS (ppmv)	Sample Date	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
Greenwaste Areas						
11						
12						
13						
14						
15						
16						
17						
18						
19						
25						
26						
27						
28						
29						
30						
Active Areas						
66						
81						
84						
85						
90						
96						
99						
103						
106						

A background level of 5 ppm was used.

Table 3-2
Integrated Surface Sampling Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
August 17, 2005

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples			
Compound	**Sample ISS Grid 3 Results (ppbV)**	**Sample ISS Grid 6 Results (ppbV)**	**Reporting Limit (ppbV)**
Hydrogen Sulfide	<50	<50	50
Benzene	0.33	0.36	0.1
Benzyl Chloride	<0.5	<0.5	0.5
Carbon Tetrachloride	0.11	0.10	0.1
Chlorobenzene	<0.2	<0.2	0.2
Chloroform	<0.1	<0.1	0.1
1,1-Dichloroethane	<0.2	<0.2	0.2
1,1-Dichloroethylene	<0.2	<0.2	0.2
1,2-Dibromoethane	<0.2	<0.2	0.2
Dichlorobenzenes(1)	<1.1	<1.1	1.1
Dichloromethane	<0.2	0.23	0.2
1,2-Dichloroethane	<0.2	<0.2	0.2
1,1,1-Trichloroethane	<0.1	<0.1	0.1
Trichloroethene	<0.1	<0.1	0.1
Perchloroethene	<0.1	<0.1	0.1
Toluene	2.23	2.47	0.3
Total Xylenes*	2.12	2.35	0.1
Vinyl Chloride	<0.2	<0.2	0.2

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples			
Compound	**Sample ISS Grid 3 Results (ppmV)**	**Sample ISS 6 Results (ppmV)**	**Reporting Limit (ppmV)**
Methane	17.1	10.8	1
Total Non-Methane Organics (as methane)	1.76	1.58	1

< Not detected at or above the method detection limit.
*Total xylenes reported includes the sum of the detected concentrations of m-& p-xylenes and o-xylenes.
(1) total amount containing meta, para, and ortho isomers

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Third Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR000001												Disconnected	C
BR000001	8/15/2005 10:16	40.2	32.8	0.1	26.9	-0.4	-0.4	0.057	128	8	10	Cracked	C
BR000001	9/9/2005 9:56	48.9	34.2	0	16.9	-10.2	-10.1	22.178	152	167	165	Closed	C
BR000002	7/1/2005 8:20	13.4	22.1	0	64.5	-16.7	-16.3	-0.481	132			1/4 Open	C
BR000002	8/2/2005 10:36	11.2	21.7	1.8	65.3	-0.4	-0.4	0.072	123	6		Cracked	C
BR000002	9/9/2005 10:02	25.7	27.5	0	46.8	-3.7	-3.7	0.907	134	20	19	Cracked	C
BR000003	7/1/2005 8:27	0.3	6.4	11.9	81.4	-0.2	-0.2	-2.461	138			Cracked	C
BR000003	8/29/2005 16:27	4	11.9	7.6	76.5	-14.7	-2.3	5.73	138	53	44	Min flow	C
BR000003	9/9/2005 10:15	0.6	6.8	12	80.6	-11.4	-0.7	2.663	159	35	43	Closed	C
BR000004	7/1/2005 8:39	15.8	19.5	0	64.7	-5.5	-5	0.477	129	14	15	Cracked	C
BR000004	8/3/2005 10:33	16.6	19.9	0.5	63	-4	-4.2	0.909	130	20	20	Cracked	C
BR000004	9/9/2005 10:38	7.7	15.6	6.6	70.1	0	0	3.937	68	43	43	Disconnected	C
BR000005	7/1/2005 8:49	1.8	10.7	3	84.5	-0.2	-0.2	-0.126	103			Cracked	C
BR000005	8/3/2005 10:44	1.8	11.5	2.7	84	-1.2	-1.2	0.399	101	21	23	Cracked	C
BR000005	9/9/2005 11:15	1.8	11.6	2.5	84.1	-0.7	-0.7	4.212	103	71	71	Cracked	C
BR000006	7/1/2005 8:53	12.8	22.8	0	64.4	-0.4	-0.4	0.037	127	4	2	Cracked	C
BR000006	8/3/2005 10:48	11	22.8	0.8	65.4	-1.3	-1.3	0.56	129	15	15	Cracked	C
BR000006	9/9/2005 11:20	9.4	20.7	0.7	69.2	-0.7	-0.7	4.265	129	43	43	Cracked	C
BR000007	7/1/2005 9:00	14.9	26.5	0	58.6	-0.1	-0.1	-0.077	102			Cracked	C
BR000007	8/3/2005 10:53	11.3	25	0.5	63.2	-1	-1.1	0.306	119	8	8	Cracked	C
BR000007	9/9/2005 11:27	10.3	22	1	66.7	-0.4	-0.5	4.045	124	42	42	Cracked	C
BR000008	7/5/2005 7:49	9.9	10.4	10.4	69.3	-19.2	-19.2	2.59	82	34		3/4 open	C
BR000008	8/3/2005 10:57											Disconnected	C
BR000008	9/9/2005 11:38	0.9	2.7	17.7	78.7	-17	-0.2	4.636	88	46	45	Closed	C
BR000009												Disconnected	C
BR000009	8/3/2005 11:01											Disconnected	C
BR000009	9/9/2005 11:48	0	0.2	20.9	78.9	-8.1	-1.3	13.035	96	25	15	Closed	C
BR000010	7/1/2005 8:45	16.6	19.8	0	63.6	-18.2	-18	0.166	112	5	4	Cracked	C
BR000010	8/2/2005 10:17	37	37.4	0	25.6	-13.2	-12.3	10.312	130	40	44	Full open	C
BR000010	9/9/2005 9:11	39	33.4	0	27.6	-17.2	-16.6	2.171	138	18	16	1/2 Open	C
BR000011	7/1/2005 11:31	45.9	38.2	0	15.9	-14.3	-14.5	0.736	147	24	24	1/2 open	C
BR000011	8/1/2005 14:37	42.8	37.8	0	19.4	-29.5	-14.8	-21.435	146		47	1/2 open	C
BR000011	9/14/2005 11:54	39.1	36	0.2	24.7	-18.1	-18.2	1.056	148	29	29	1/2 Open	C

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Third Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR000014	7/1/2005 9:37	14.7	23	0	62.3	-0.7	-0.7	0.161	138	8	9	Cracked	C
BR000014	8/3/2005 10:09	14.3	22.8	0.1	62.8	-1.3	-1.3	0.598	126	16	16	Cracked	C
BR000014	9/26/2005 12:06	27.9	23.4	7.3	41.4	-17.4	-17.3	-1.305	96		12	1/2 open	C
BR000015	7/1/2005 8:32	9.6	17.1	0	73.3	-2.9	-4.6	0.502	119	24	24	Cracked	C
BR000015	8/3/2005 10:05	9.5	17.8	0.4	72.3	-4.3	-4.3	0.399	118	21	21	Cracked	C
BR000015	9/9/2005 10:31	7.8	15.8	0.4	76	-28.1	-12	4.678	140	72	64	Cracked	C
BR000016	7/1/2005 9:32	38.8	33.1	1.6	26.5	-5.9	-6	0.253	88	6	4	1/2 open	C
BR000016	8/15/2005 10:03	38.8	35.6	0.2	25.4	-6	-5.3	0.047	97	2	7	1/2 open	C
BR000016	9/14/2005 14:04	40.1	34.6	0.6	24.7	-3.3	-3.1	-0.894	89			1/2 Open	C
BR000017	7/1/2005 9:25	18.6	25.4	0	56	-1.4	-1.5	0.017	103	1	2	Cracked	C
BR000017	8/3/2005 11:12	19	26	0.4	54.6	-2.4	-2.4	0.614	105	10	10	Cracked	C
BR000017	9/9/2005 12:04	18.4	24.7	0.1	56.8	-1.9	-1.9	4.35	103	26	26	Cracked	C
BR000018	7/8/2005 8:34	12.9	18	1.1	68	-10.9	-10.8	0.016	116	4	7	Cracked	C
BR000018	8/3/2005 10:39	17.1	20	0.3	62.6	-2.8	-2.8	0.366	114	21	22	Cracked	C
BR000018	9/9/2005 11:09	22.8	22	0	55.2	-1.5	-1	4.678	105	75	76	Cracked	C
BR000019	7/1/2005 7:56	42.5	35.7	0	21.8	-6.4	-5.7	1.812	124	29	28	3/4 open	C
BR000019	8/3/2005 9:55	36.2	33.9	0.3	29.6	-6.9	-7.1	1.808	124	28	29	1/2 open	C
BR000019	9/14/2005 14:13	44.9	35.8	0.5	18.8	-7.6	-8	1.276	126	24	30	Full Open	C
BR000020	7/1/2005 10:58	33	31.5	0	35.5	-5.7	-5.6	1.566	127	26	25	3/4 open	C
BR000020	8/3/2005 10:26	28.2	30.1	0.4	41.3	-6.7	-6.5	2.425	127	33	31	1/2 open	C
BR000020	9/20/2005 14:45	27.5	29.8	0.3	42.4	-6.4	-7.3	2.46	0	36	37	Min Flow	C
BR000021	7/1/2005 11:05	30.5	30.4	0	39.1	-4	-3.5	0.855	126	19	36	1/2 open	C
BR000021	8/3/2005 10:21	27.7	29.3	0.3	42.7	-5	-5.2	0.971	126	21	52	1/2 open	C
BR000021	9/14/2005 13:42	37.6	31.8	0.5	30.1	-6.1	-5.7	2.387	127	33	33	1/2 Open	C
BR000022	7/1/2005 9:20	25.4	21.5	8.1	45	-1.8	-1.8	0.235	99	14	13	Cracked	C
BR000022	8/29/2005 12:01	30.5	27.8	5.6	36.1	-8	-5.8	0.914	109	27	42	Min flow	C
BR000022	9/9/2005 11:58	0	0	21	79	-0.4	-0.2	19.553	71	2	1	Closed	C
BR000025	7/1/2005 11:37	58	41.9	0	0.1	-8.2	-8.4	1.545	112	43	44	Full open	C
BR000025	8/2/2005 10:06	55.3	44.6	0	0.1	-10	-10	5.278	114	80	121	Full open	C
BR000025	9/14/2005 11:30	54.8	41	0.1	4.1	-13.1	-13.1	2.975	112	60	60	Full Open	C
BR000026	7/1/2005 11:11	52.3	41.2	0	6.5	-14.6	-13.4	0.103	122	2	4	Full open	C
BR000026	8/2/2005 10:37	20.7	24.6	4.5	50.2	0	0	0.378	95	4	3	Full open	C
BR000026	9/9/2005 8:46	51.6	38.2	0	10.2	-10.5	-16.4	0.185	115	3	4	1/4 Open	C

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Third Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR000027	7/1/2005 9:13	32.2	32.6	0	35.2	-9.6	-9.3	3.018	120	36	36	Cracked	C
BR000027	8/3/2005 12:50	29.9	32.2	0.4	37.5	-9.7	-0.4	1.492	121	25	13	Cracked	C
BR000027	9/9/2005 8:54	28.7	30.3	0.1	40.9	-11.5	-12.2	3.698	121	40	40	1/4 Open	C
BR000028	7/1/2005 10:16	35.6	33.7	0	30.7	-7.2	-7.1	0.404	75	0	0	1/2 open	C
BR000028	8/2/2005 10:30	21	25.1	4.2	49.7	-0.2	-0.2	14.21	79	0	0	1/2 open	C
BR000028	9/9/2005 9:21	28.8	30.2	0	41	-9.2	-5.4	9.079	120	0	0	1/4 Open	C
BR000029												Disconnected	C
BR000031	7/6/2005 13:47	1.5	19.3	0.3	78.9	-0.4	-0.4	0.13	97	7	8	Cracked	C
BR000031	8/1/2005 13:49	0.8	17.2	0.7	81.3	-0.5	-0.5	2.022	97	30	30	Cracked	C
BR000031	9/14/2005 11:10	0.6	16.8	1.3	81.3	-0.6	-0.4	0.503	100	15	12	Cracked	C
BR000033	7/5/2005 10:58	23.6	28.7	0	47.7	-4.3	-4.3	2.715	121	35	70	1/2 open	C
BR000033	8/1/2005 14:02	18.3	25.5	1.1	55.1	-4.2	-4.2	2.113	122	30	72	1/4 Open	C
BR000033	9/14/2005 10:49	16.4	24.8	1.4	57.4	-4.3	-1.5	8.409	124	61	17	1/4 Open	C
BR000034												Disconnected	C
BR000034												Disconnected	C
BR000034	9/14/2005 10:09	19.1	28.4	0.2	52.3	-4.1	-0.6	9.107	147	64	8	Closed	C
BR000036	7/6/2005 13:57	11.3	22.9	0.1	65.7	0	-0.1	0.011	128	2		Cracked	C
BR000036	8/1/2005 13:02	8.4	22.1	0.7	68.8	-0.2	-0.2	1.612	101	26	27	Cracked	C
BR000036	9/14/2005 9:11	12.7	24.9	0.3	62.1	-3.8	-0.3	11.785	142	72		Closed	C
BR000039	7/6/2005 13:24	14.7	24.2	1	60.1	-2.8	-2.7	2.891	128	35	57	1/2 open	B
BR000039	8/1/2005 12:53	12.5	23.8	1.3	62.4	-3.1	-3.1	2.593	127	33	67	1/2 open	B
BR000039	9/14/2005 8:16	17.1	26.4	1.4	55.1	-0.5	-0.6	4.637	126	45	45	Cracked	B
BR000084	7/1/2005 10:01	49.2	38.8	0	12	-13.2	-13.3	0.569	133	16	73	Full open	C
BR000084	8/2/2005 10:45	16.1	19.5	6.7	57.7	-0.5	-0.5	0.095	118	6	4	Cracked	C
BR000084	9/14/2005 14:23	56.6	42.7	0.3	0.4	-1.2	-8.5	-0.355	111		87	Cracked	C
BR00023D	7/1/2005 10:47	55	39	0	6	-2.3	-2.2	0.604	92	23	10	Full open	C
BR00023D	8/2/2005 10:43	21.1	25.2	4.5	49.2	-0.2	-0.2	-13.083	99			Full open	C
BR00023D	9/14/2005 13:28	48.1	38	0.3	13.6	-2.3	-2.6	0.141	112	8	8	1/2 Open	C
BR00023S	7/1/2005 10:51	58.3	41.6	0	0.1	-2.4	-2.4	0.68	109	24		Full open	C
BR00023S	8/2/2005 10:46	19.2	23.1	5.6	52.1	-0.1	-0.1	-15.106	93			Full open	C
BR00023S	9/14/2005 13:34	58.1	41.6	0.2	0.1	-1.9	-2	0.221	108	6	6	1/2 Open	C
BR00105D	7/1/2005 10:35	47.2	34.2	3.7	14.9	-2.4	-2.4	0.037	75	0	0	Full open	C
BR00105D	8/2/2005 10:53	20.2	24.8	4.2	50.8	0	0	8.863	89	0	0	Full open	C

TABLE 3-3
LFG Well Data for "B" and "C" Monitoring Grids
Third Quarter 2005
Bradley Landfill, Sun Valley, California

Device ID	Date/Time	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance	Current Static Pressure	Adjusted Static Pressure	Current Differential Pressure	Current Temp	Current Flow	Adjusted Flow	Status	Grid Type
BR00105D	9/29/2005 15:49	51.1	34.6	3.6	10.7	-0.9	-0.9	0.091	112	0	0	Full open	C
BR00105S	7/1/2005 10:39	57.8	42.1	0	0.1	-2.4	-2.4	2.602	73	0	0	Full open	C
BR00105S	8/2/2005 10:57	20.7	25.1	3.9	50.3	0	0	14.671	91	0	0	Full open	C
BR00105S	9/9/2005 9:41	57.4	39.2	0.1	3.3	-4.1	-4.2	0.004	124	0	0	1/2 open	C
BR00106D	7/1/2005 10:22	32.6	24.9	7.1	35.4	-2.6	-2.7	1.27	109	14	14	Cracked	C
BR00106D	8/1/2005 14:45	43.6	33.2	4.6	18.6	-2.9	-2.9	0.845	115	12	22	Cracked	C
BR00106D	9/29/2005 15:36	16.4	10	14.9	58.7	-0.5	-0.2	1.987	108	18	9	Closed	C
BR00106S	7/1/2005 10:26	50.9	38.6	0.3	10.2	-2.2	-2.1	0.886	120	12	12	1/4 open	C
BR00106S	8/1/2005 14:50	34.1	29.7	4.8	31.4	-4.3	-4.3	2.184	121	19	42	1/4 Open	C
BR00106S	9/29/2005 15:40	44.4	32.9	2.8	19.9	0	-1.2	0.363	117	7	42	Cracked	C
BR0EW100	7/1/2005 10:10	7	21.4	0	71.6	-1.9	-1.9	0.076	81	17	16	Cracked	C
BR0EW100	8/2/2005 10:23	4.6	21.5	0.2	73.7	-1.9	-1.9	-2.255	89			Full open	C
BR0EW100	9/9/2005 9:03	5.1	20.3	0.6	74	-2.7	-2.8	0.587	69	28	4	Cracked	C

4 INSTANTANEOUS SURFACE EMISSION MONITORING §1150.1(e)(3)

4.1 Instantaneous Surface Emission Monitoring Protocol

Quarterly instantaneous surface emission monitoring was conducted in July, August, and September 2005 by RES Inc. technicians and consisted of monitoring the landfill surface for the presence of LFG surface emissions. Instantaneous Surface Monitoring (ISM) was performed using procedures and equipment described in the SCAQMD Guidelines for Implementation of Rule 1150.1 and was consistent with the compliance plan for the Landfill.

A portable flame ionization detector (FID), which meets or exceeds all guideline specifications was used to obtain instantaneous measurements of TOC as methane concentrations immediately above the surface of the grids. Calibrations were performed on the OVA equipment using factory specifications. While traversing the disposal area, the detector probe was held within 0 to 3 inches above the landfill surface to obtain the readings. A surface inspection was also performed during monitoring to identify potential cracks in the landfill cover.

Using the OVA, RES technicians walked a pattern across the landfill surface consisting of linear traverses approximately 100 feet apart at an approximate rate of 100 to 110 feet per minute. TOC as methane measurements were recorded at approximately every 100 linear feet. While monitoring, the OVA wand and funnel assembly was held no further than 0 to 3 inches above the landfill surface.

In addition to walking the traverses, the OVA was used by Shaw personnel to measure TOC as methane concentrations at landfill surface fissures, along the refuse/natural soil interface, and at corrugated metal pipes, gas extraction wells and other points visually identified as areas potentially having repeatable TOC as methane concentrations greater than 500 ppm.

The landfill sampling grids are divided into Types A, B, and C. Type A surface grids have no exclusions from sampling and sampling is conducted in accordance with Rule 1150.1. Type B surface grids contain steep slopes or steep slopes and dense vegetation. Sampling of Type B grids consists of sampling the toe and top of Grids 128 and 130. Vacuum readings from gas extraction well 39, located within a Type B grid, is recorded monthly and included in the quarterly report. Twenty-two Type C grids are located in the area of active recycling operations. Sampling of Type C surface grids consists of sampling a course of 2,600 linear feet but not less than 1,900 linear feet in each grid for a continuous 25-minute period, excluding stockpiles, stored equipment and recycling equipment. Vacuum readings from all LFG extraction wells located within Type C active recycling grids are recorded monthly and included in the quarterly report.

Vacuum readings recorded in the third quarter from the extraction wells located within Type B and C grids are presented in Table 3-3.

Areas that were not monitored due to landfill operation are shown on Figure 1.

Wind speed and direction were measured using a Climatronics portable meteorological station mounted on the roof of the main office building at the landfill described in Section 7, Field Instrumentation and Equipment Specifications. Measurements were recorded on a continuous strip chart recorder. The wind speed and direction monitor was erected in the central portion of the site away from canyon walls and obstructions at an approximate elevation of 1,300 feet above mean sea level.

4.2 Instantaneous Surface Emission Monitoring Results

Monitoring measurements obtained during the month of July exceeded 500 ppm as methane in Grids 2 through 5, 87, 88, 115, 127, 131, and 132. Monitoring measurements in August exceeded 500 ppm as methane in Grids 1, 2, 4, 5, 6, 49, 61, 76, 84, 87, 88, 89, 111, and 112. Monitoring measurements in September exceeded 500 ppm as methane in Grids 1, 2, 4, 6, 80, 87, 88, 89, 105 and 112. Grids with surface emissions exceeding 500 ppm are shown in Table 4-1. All other grids were below 500 ppm TOC as methane.

Recorded concentrations of TOC as methane in the grids ranged from 0 to 100,000 ppm above background. In accordance with SCAQMD Rule 1150.1 regarding detecting TOC as methane concentrations exceeding 500 ppmv, each of these grids were re-sampled within 10 calendar days of the original detection. Remonitored concentrations in these grids all measured below 500 ppmv. Remonitoring results are shown in Table 4-1. Figures 1, 2, and 3 show grids where surface emissions exceeded 500 ppm TOC as methane during instantaneous monitoring. During the period of instantaneous monitoring, the wind speed average was below 5 miles per hour and the instantaneous wind speed was below 10 miles per hour.

Table 4-1
Instantaneous Emission Monitoring Results
Bradley Landfill & Recycling Center, Sun Valley, CA

INSTRUMENT: OVA 128/88

SAMPLING PERIOD: 3RD QUARTER 2005
TECHNICIAN: RES

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
2	2,000	7/27/2005	Repaired surface slope	7/27/2005	8/4/2005	400
3	10,000	7/27/2005	Repaired surface slope	7/27/2005	8/4/2005	400
4	50,000	7/27/2005	Repaired surface slope and tuned Wells 42 and 43	7/27/2005	8/4/2005	400
5	50,000	7/27/2005	Repaired surface slope and tuned Wells 41D and 87	7/27/2005	8/4/2005	400
87	10,000	7/27/2005	Repaired surface slope and tuned Well EW57	7/27/2005	8/4/2005	100
88	1,000	7/27/2005	Repaired surface slope and tuned Well EW74	7/27/2005	8/4/2005	200
115	1,000	7/27/2005	Repaired surface slope and tuned Well 31	7/27/2005	8/4/2005	200
127	2,000	7/27/2005	Repaired surface slope	7/27/2005	8/4/2005	300
131	100,000	7/27/2005	Repaired surface slope	7/27/2005	8/4/2005	300
132	2,000	7/27/2005	Repaired surface slope	7/27/2005	8/4/2005	300
1	1,000	8/30/2005	Repaired surface slope	8/30/2005	9/9/2005	5 - 10
2	10,000	8/30/2005	Repaired surface slope	8/30/2005	9/9/2005	30 - 50
4	100,000	8/30/2005	Repaired surface slope and tuned Wells 42 and 43	8/30/2005	9/1/2005	60
5	100,000	8/30/2005	Repaired surface slope and tuned Well 87	8/30/2005	9/1/2005	5 - 10
6	1,000	8/30/2005	Repaired surface slope and tuned Well 86	8/30/2005	9/1/2005	5 - 20
49	1,000	8/30/2005	Repaired surface slope and tuned Well 68DR/SR	8/30/2005	9/1/2005	10 - 20

Table 4-1
Instantaneous Emission Monitoring Results
Bradley Landfill & Recycling Center, Sun Valley, CA

INSTRUMENT: OVA 128/88

SAMPLING PERIOD: 3RD QUARTER 2005
TECHNICIAN: RES

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
61	1,000	8/30/2005	Repaired surface slope and tuned Well 125	8/30/2005	9/9/2005	5 -10
76	5,000	8/30/2005	Repaired surface slope tuned Well P13D/S	8/30/2005	9/1/2005	5 - 20
84	5,000	8/30/2005	Repaired surface slope and tuned Well EW90 and EW53	8/30/2005	9/1/2005	5 - 10
87	1,000	8/30/2005	Repaired surface slope tuned Well EW57	8/30/2005	9/1/2005	5 - 10
88	5,000	8/30/2005	Repaired surface slope tuned Well EW74 DR/SR	8/30/2005	9/1/2005	30 - 40
89	2,000	8/30/2005	Repaired surface slope tuned Well 63	8/30/2005	9/1/2005	5 - 10
111	100,000	8/30/2005	Repaired surface slope	8/30/2005	9/9/2005	50 - 100
112	100,000	8/30/2005	Repaired surface slope	8/30/2005	9/9/2005	100 - 200
1	5,000	9/21/2005	Repaired surface slope	9/21/2005	10/3/2005	5 - 30
2	5,000	9/21/2005	Repaired surface slope	9/21/2005	10/3/2005	5 - 30
4	10,000	9/21/2005	Repaired surface slope	9/21/2005	10/3/2005	5 - 40
6	5,000	9/21/2005	Repaired surface slope and tuned Well 86	9/21/2005	9/26/2005	5 - 10
80	1,000	9/21/2005	Repaired surface slope and tuned Well EW52 DR/SR	9/21/2005	9/23/2005	5 - 40
87	1,000	9/21/2005	Repaired surface slope and tuned Well EW57 DR/SR	9/21/2005	9/23/2005	10 - 150
88	3,000	9/21/2005	Repaired surface slope and tuned well EW74 DR/SR	9/21/2005	9/26/2005	5 - 10
105	10,000	9/21/2005	Repaired surface slope and tuned Well 210	9/21/2005	9/23/2005	5 - 20

Table 4-1
Instantaneous Emission Monitoring Results
Bradley Landfill & Recycling Center, Sun Valley, CA

INSTRUMENT: OVA 128/88

SAMPLING PERIOD: 3RD QUARTER 2005
TECHNICIAN: RES

LOCATION OF LEAK	LEAK CONCENTRATION (ppmv)	DATE OF DISCOVERY	ACTION TAKEN TO REPAIR LEAK	DATE OF REPAIR	DATE OF ANY REQUIRED RE-MONITORING	RE-MONITORED CONCENTRATION (ppmv)
112	10,000	9/21/2005	Repaired surface slope	9/21/2005	10/3/2005	20 - 80

COMMENTS: Any component leak that meets or exceeds the 500 ppmv Methane limit must be repaired within 10 days.

5 LANDFILL GAS SAMPLING §1150.1(e)(4)

5.1 Landfill Gas Characterization Protocol

Quarterly LFG samples were collected from the gas compressor and the three (3) LFG flares on August 30, 2005. A portable pump was used to draw the LFG sample into a 10-liter Tedlar Bag enclosed in a light sealed box. The LFG sample was collected over a continuous ten-minute period.

5.2 Landfill Gas Sample Laboratory Results

Samples BL-002 (Flare #1), BL-003 (Flare #2), BL-004 (Flare #3), and BL-005 (Gas Plant), were taken to AtmAA, Inc. on August 30, 2005. The gas samples were analyzed for toxic air contaminants, TGNMOs, fixed gases, and hydrogen sulfide. Table 5-2, Landfill Gas Sample Laboratory Summary, gives the laboratory methods and results for these constituents. Appendix E, Landfill Gas Sampling includes the laboratory report prepared by AtmAA, Inc.

Samples BL-002, BL-003, BL-004, and BL-005, contained detectable concentrations of one or more of the following compounds: benzene, chlorobenzene, 1,1-dichloroethane, 1,1-dichloroethylene, dichloromethane, dichlorobenzenes, 1,2-dichloroethane, trichloroethene, perchloroethylene, toluene, vinyl chloride, and total xylenes. Laboratory results for samples collected from the gas plant and each flare are presented in Appendix E.

5.3 SCAQMD Rule 431.1 Sulfur Monitoring

Laboratory landfill gas results for quarterly samples taken from the gas compressor and the 3 flares are summarized in Tables 5-1 through 5-3. Analytical results are located in Appendix E.

Table 5-1 - Landfill Gas Summary of Results

Components	Gas Compressor (BL-001)	Flare 1 (BL-003)	Flare 2 (BL-004)	Flare 3 (BL-002)
TGNMO (ppmv)	10,700	5,520	1,250	7,180
Hydrogen Sulfide (ppmv)	54.8	53.1	32.4	13.7
Methane (%)	41.4	43.1	27.3	32.3

Table 5-2
Landfill Gas Sample - Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
August 30, 2005

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples					
Compound	**Gas Plant (ppbV)**	**Flare #1 BL-002 (ppbV)**	**Flare #2 BL-003 (ppbV)**	**Flare #3 BL-001 (ppbV)**	**Reporting Limit (ppbV)**
Benzene	2,990	2,280	647	8,270	20
Benzyl Chloride	<40	<40	<40	<40	40
Carbon Tetrachloride	<30	<30	<30	<30	30
Chlorobenzene	209	83.6	51.2	152	30
Chloroform	<20	<20	<20	<20	20
1,1-Dichloroethane	163	176	56.0	129	20
1,1-Dichloroethylene	57.0	58.8	<40	50.1	40
Dichloromethane	357	490	<30	246	30
1,2-Dibromoethane	<30	<30	<30	<30	30
Dichlorobenzenes[1]	1,880	<30	<30	<30	30
1,2-Dichloroethane	67.6	51.9	21.3	51.4	20
Trichloroethene	614	448	124	446	20
Perchloroethylene	1,750	1,120	453	1,140	20
Toluene	35,600	19,300	1,230	22,400	20
1,1,1-trichoroethane	<20	<20	<20	<20	20
Total Xylenes*	24,630	6,490	1,733	10,520	20
Vinyl Chloride	174	210	604	342	20
Compound	**(ppmV)**	**(ppmV)**	**(ppmV)**	**(ppmV)**	**(ppmV)**
Total Non-Methane Organics (as Methane)	10,700	5,520	1,250	7,180	20
Hydrogen sulfide	54.8	53.1	32.4	13.7	0.5
Carbonyl sulfide	0.35	0.30	0.091	0.22	0.08
Methyl mercaptan	4.45	4.88	0.31	3.38	0.06
Ethyl mercaptan	<0.1	<0.1	<0.1	<0.1	0.1
Dimethyl sulfide	6.38	5.94	0.15	8.08	0.1
Carbon disulfide	0.099	0.086	0.085	0.070	0.09
Isopropyl mercaptan	0.33	0.36	<0.06	<0.06	0.06
n-propyl mercaptan	<0.06	<0.06	<0.06	<0.06	0.06
Dimethyl disulfide	0.29	0.30	0.085	0.43	0.06
Total reduced sulfur	54.8	65.4	32.4	13.7	0.5
BTU / ft.3	427	440	277	332	1

Table 5-2 (Continued)
Landfill Gas Sample - Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
August 30, 2005

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples					
Compound	**Gas Plant (%,V)**	**Flare #1 BL-002 (%,V)**	**Flare #2 BL-003 (%,V)**	**Flare #3 BL-001 (%,V)**	**Reporting Limit (%,V)**
Nitrogen	20.8	17.7	41.4	32.0	0.1
Oxygen	1.95	1.67	4.06	3.44	0.1
Methane	41.4	43.1	27.3	32.3	0.1
Carbon dioxide	34.6	36.0	25.9	29.7	0.1

ND: Not detected.
*Total xylenes reported includes the sum of the detected concentrations of m-& p-xylenes and o-xylenes.
** = Coeluting Compounds
The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.
(1) Total amount containing meta, para, and ortho isomers.

Table 5-3
Quarterly H_2S Monitoring Results

Bradley Landfill, Sun Valley, California

DATE	TIME	TEMP °F	PLANT GAS SALES	FLARE 1	FLARE 2	FLARE 3
Colorimetric Tube Sample Results						
7/22/2005	11:13	98	58	60	40	40
8/30/2005	14:00	98	55	40	35	20
9/19/2005	10:18	77	65	60	40	40
Quarterly H_2S Laboratory Results						
8/30/2005	14:30		54.8	53.1	32.4	13.7

Notes:

Gas Compressor shutdown during the April 2005 monthly H_2S monitoring event due to repairs at the Penrose Landfill Gas Conversion, LLC

Monthly H_2S readings taken using a Draeger colorimetric tube.

H_2S Sample readings are no longer taken daily at the compressor and flaring system.

Analyses taken using a 10 liter bag sample and analyzed by AtmAA Inc. Laboratory.

6 AMBIENT AIR SAMPLING§1150.1(e)(5)

6.1 Ambient Air Sampling Protocol

Third quarter 2005 ambient air sampling was performed on July 17 and 18, 2005. Sampling was performed consistent with SCAQMD Rule 1150.1, Attachment A.

Four ambient air samplers were used to collect upwind (south) and downwind (north) samples. Two ambient air samplers were placed upwind at the landfill property boundary and two downwind at the landfill property boundary. Figure 1, Surface Emissions Monitoring Site Plan, shows the ambient air sample locations.

The ambient air sampling program was designed in accordance with the Guidelines for Implementation of Rule 1150.1 and the compliance plan requirements issued by the SCAQMD. All procedures and equipment used in the program are consistent with guideline specifications.

The Landfill compliance plan requires the collection of four (4) 12-hour samples located at the landfill perimeter. These 12-hour samples are representative of the predominant upslope and down slope wind flow patterns (two per location) during each 12-hour time periods. These locations were selected based upon evaluation of current and historic wind monitoring data collected on site. Sampling stations are positioned to provide good meteorological exposure to the predominant upslope flows and anticipated nighttime local air drainage patterns typically encountered at this site.

Ambient air samplers used at the landfill were constructed, installed, and operated to meet SCAQMD design criteria and performance specifications published in the Rule 1150.1 guidelines. Light-sealed boxes containing individual 10-liter Tedlar sample bags were housed within each sampling station enclosure. Analyses were performed within 72 hours after sampling was concluded

A Climatronics portable wind speed and direction station connected to a continuous recorder was used to record wind speed and direction for the entire duration of integrated sampling. Section 7, Field Instrumentation and Equipment Specifications, describes both the ambient air sampler assembly and the wind station in greater detail. Tedlar bags used for collecting the 24-hour integrated samples were purged three times with nitrogen and tested for leaks prior to usage. Appendix G, Tedlar Bag Quality Assurance and Control,

includes a Tedlar bag checklist that summarizes the pertinent data regarding this procedure

The four samples were analyzed for toxic air contaminants, methane, and TGNMOs by AtmAA, Inc. The technicians responsible for transporting the integrated samples recorded pertinent information on a Chain-of-Custody form included in Appendix F, Ambient Air Sampling. Additional personnel receiving the integrated samples recorded their signatures on the Chain-of-Custody form.

Ambient air samples were collected when the average wind speed was five miles per hour or less, and the instantaneous wind speed was less than fifteen miles per hour. The samples were not collected within 72 hours of a rainstorm. Wind speed and direction charts are included in Appendix F.

6.2 Ambient Air Laboratory Results

Upwind ambient air samples (AA-1, AA-4) and downwind ambient air samples (AA-2, AA-3) were sent to AtmAA, Inc. on July 17 and 18, 2005 for analysis. Table 6-1, Ambient Air Samples Laboratory Summary, summarizes the laboratory methods and results.

Upwind Samples

Laboratory analysis of sample AA-1 (Lab Sample 01995-14) detected a TGNMO concentration of 2.46 ppmv. The methane concentration was 3.52 ppmv, benzene concentration was 0.66 ppmv, dichloromethane concentration was 0.34, carbon tetrachloride concentration was 0.12 ppmv, toluene concentration was 2.23 ppmv, and total xylenes concentration was 1.84 ppmv.

Laboratory analysis of sample AA-4 (Lab Sample 01995-17) detected a TGNMO concentration of 2.16 ppmv. The methane concentration was 1.93 ppmv, benzene concentration was 0.81 ppmv, carbon tetrachloride concentration was 0.13 ppmv, toluene concentration was 1.27 ppmv, and total xylenes concentration was 1.06 ppmv.

Downwind Samples

Laboratory analysis of sample AA-2 (Lab Sample 01995-15) detected a TGNMO concentration of 2.63 ppmv. The methane concentration was 2.33 ppmv, benzene concentration was 0.69 ppmv, carbon tetrachloride concentration was 0.11 ppmv, toluene concentration was 2.12 ppmv, and total xylenes concentration was 1.70 ppmv.

Laboratory analysis of sample AA-3 (Lab Sample 01995-16) detected a TGNMO concentration of 2.08 ppmv. The methane concentration was 6.94 ppmv, benzene

concentration was 0.63 ppmv, dichloromethane concentration was 0.29 ppmv, carbon tetrachloride concentration was 0.11 ppmv, toluene concentration was 1.01 ppmv, and total xylenes concentration was 1.66 ppmv.

Table 6-1
Ambient Air Sampling Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
July 17 and 18, 2005

SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	**Sample Ambient Air AA-1 Results (ppbV)**	**Sample Ambient Air AA-2 Results (ppbV)**	**Reporting Limit (ppbV)**
Hydrogen Sulfide	<50	<50	50
Benzene	0.66	0.69	0.1
Benzyl Chloride	<0.5	<0.5	0.4
Carbon Tetrachloride	0.12	0.11	0.1
Chlorobenzene	<0.2	<0.2	0.1
Chloroform	<0.1	<0.1	0.1
1,1-Dichloroethane	<0.2	<0.2	0.1
1,1-Dichloroethylene	<0.2	<0.2	0.1
1,2-Dibromoethane	<0.2	<0.2	0.1
Dichlorobenzene[1]	<1.1	<1.1	1.1
Dichloromethane	0.34	<0.2	0.1
1,2-Dichloroethane	<0.2	<0.2	0.1
1,1,1-Trichloroethane	<0.1	<0.1	0.1
Perchloroethene	<0.1	<0.1	0.1
Toluene	2.23	2.12	0.1
Total Xylenes*	1.84	1.70	0.3
Trichloroethene	<0.1	<0.1	0.1
Vinyl Chloride	<0.2	<0.2	0.1

SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	**Sample Ambient Air AA-1 Results (ppbV)**	**Sample Ambient Air AA-2 Results (ppbV)**	**Reporting Limit (ppmV)**
Methane	3.52	2.33	1
Total Non-Methane Organics (as methane)	2.46	2.63	1

Table 6-1 (Continued)
Ambient Air Sampling Laboratory Summary
Bradley Landfill & Recycling Center (BLRC)
July 17 and 18, 2005

SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	**Sample Ambient Air AA-3 Results (ppbV)**	**Sample Ambient Air AA-4 Results (ppbV)**	**Reporting Limit (ppbV)**
Hydrogen Sulfide	<50	<50	50
Benzene	0.63	0.81	0.1
Benzyl Chloride	<0.5	<0.5	0.4
Carbon Tetrachloride	0.11	0.13	0.1
Chlorobenzene	<0.2	<0.2	0.1
Chloroform	<0.1	<0.1	0.1
1,1-Dichloroethane	<0.2	<0.2	0.1
1,1-Dichloroethylene	<0.2	<0.2	0.1
1,2-Dibromoethane	<0.2	<0.2	0.1
Dichlorobenzene[1]	<1.1	<1.1	1.1
Dichloromethane	0.29	<0.2	0.1
1,2-Dichloroethane	<0.2	<0.2	0.1
1,1,1-Trichloroethane	<0.1	<0.1	0.1
Perchloroethene	<0.1	<0.1	0.1
Toluene	1.01	1.27	0.1
Total Xylenes*	1.66	1.06	0.3
Trichloroethene	<0.1	<0.1	0.1
Vinyl Chloride	<0.2	<0.2	0.1

SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples			
Compound	**Sample Ambient Air AA-3 Results (ppbV)**	**Sample Ambient Air AA-4 Results (ppbV)**	**Reporting Limit (ppbV)**
Methane	6.94	1.93	1
Total Non-Methane Organics (as methane)	2.08	2.16	1

7 FIELD INSTRUMENTATION AND EQUIPMENT SPECIFICATIONS

7.1 Meteorological Station

A Climatronics portable meteorological station is used for measuring wind speed and direction during instantaneous and integrated surface sampling, and ambient air monitoring. This monitor collects continuous wind data during all monitoring events. The wind system consists of a Climatronics monitor, equipped with F460 wind sensors with threshold speeds of 0.50 miles per hour and a portable dual channel recording strip chart.

A continuous recorder and battery is housed in a portable steel case to prevent damage to the system. The continuous recorder averages wind speed and direction measurements in 15-minute increments. Measurements are recorded on a strip chart. The date, time, and wind speed and direction measurements are recorded daily after each instantaneous or integrated sampling session is completed.

A supervisor monitored the wind speed during instantaneous and integrated sampling sessions so that technicians are continuously aware of the wind speed when walking traverses or grid patterns.

7.2 Organic Vapor Analyzer

A portable Organic Vapor Analyzer (OVA) manufactured by Foxboro was used for monitoring the surface emission concentration of total organic compounds (TOCs) during instantaneous monitoring, and for measuring TOC concentrations in integrated surface samples and perimeter probes (ppm range). The OVA used had the following specifications:

- Range: 0-10,000 ppm (v/v)
- Minimum detectable limit: 5 ppm
- Response time: 15 seconds
- Flame out indicator: audible and visual
- Accuracy: +/-4%
- Precision: +/-3%

- Ambient temperature: 0-50 degrees Celsius

7.3 GEM-500 Gas Extraction Monitor

A GEM-500 Gas Extraction Monitor, manufactured by LANDTEC for use at landfills, was used for monitoring LFG composition. Compounds measured include methane, carbon dioxide, oxygen, and balance gas as nitrogen in percent volume and methane as percent of LEL.

The GEM-500 specifications are as follows:

	Sensor Range Imperial	**Resolution Imperial**
Methane - CH_4:	0-100%	0.1%
Carbon dioxide – CO_2:	0-75%	0.1%
Oxygen – O_2:	0-100%	0.1%
Pressure (differential):	0-10" w.c.	0.01" w.c.
(static):	0-100" w.c.	0.1"w.c.

GEM-500 typical accuracy:

Concentration	**%CH_4 by Volume**	**%CO_2 by Volume**	**%O_2 by Volume**
5% LEL	+/- 0.3%	N/A	+/- .25%
75%	+/- 1.9%	+/- 3.0%	N/A
100%	+/- 1.95%	N/A	N/A

7.4 GEM-2000 Gas Extraction Monitor

A GEM-2000 Gas Extraction Monitor, manufactured by LANDTEC for use at landfills, was used for monitoring LFG composition. Compounds measured include methane, carbon dioxide, oxygen, and balance gas as nitrogen in percent volume and methane as percent of LEL.

The GEM-2000 specifications are as follows:

	Sensor Range Imperial	Resolution Imperial
Methane - CH_4:	0-100%	0.1%
Carbon dioxide – CO_2:	0-100%	0.1%
Oxygen – O_2:	0-25%	0.1%
Pressure (differential):	0-10" w.c.	0.01" w.c.
(static):	0-100" w.c.	0.1"w.c.

GEM-2000 typical accuracy:

Concentration	%CH_4 by Volume	%CO_2 by Volume	%O_2 by Volume
0-5%	+/- 0.5%	+/- 0.5%	+/- .25%
5-15%	+/- 1%	+/- 1%	N/A
15%-FS	+/- 3%	N/A	N/A

7.5 Integrated Surface Sampler

Each portable Integrated Sampler is comprised of a Tedlar bag, DC pump, and a calibrated flow controller. Each bag sampler is calibrated by a film (bubble meter) calibration method. Each Tedlar bag sample was purged three times with ultra-pure nitrogen before sampling and enclosed in a light-sealed box after sampling. Analyses were performed within 72 hours after sampling was conducted.

7.6 Tedlar Bags

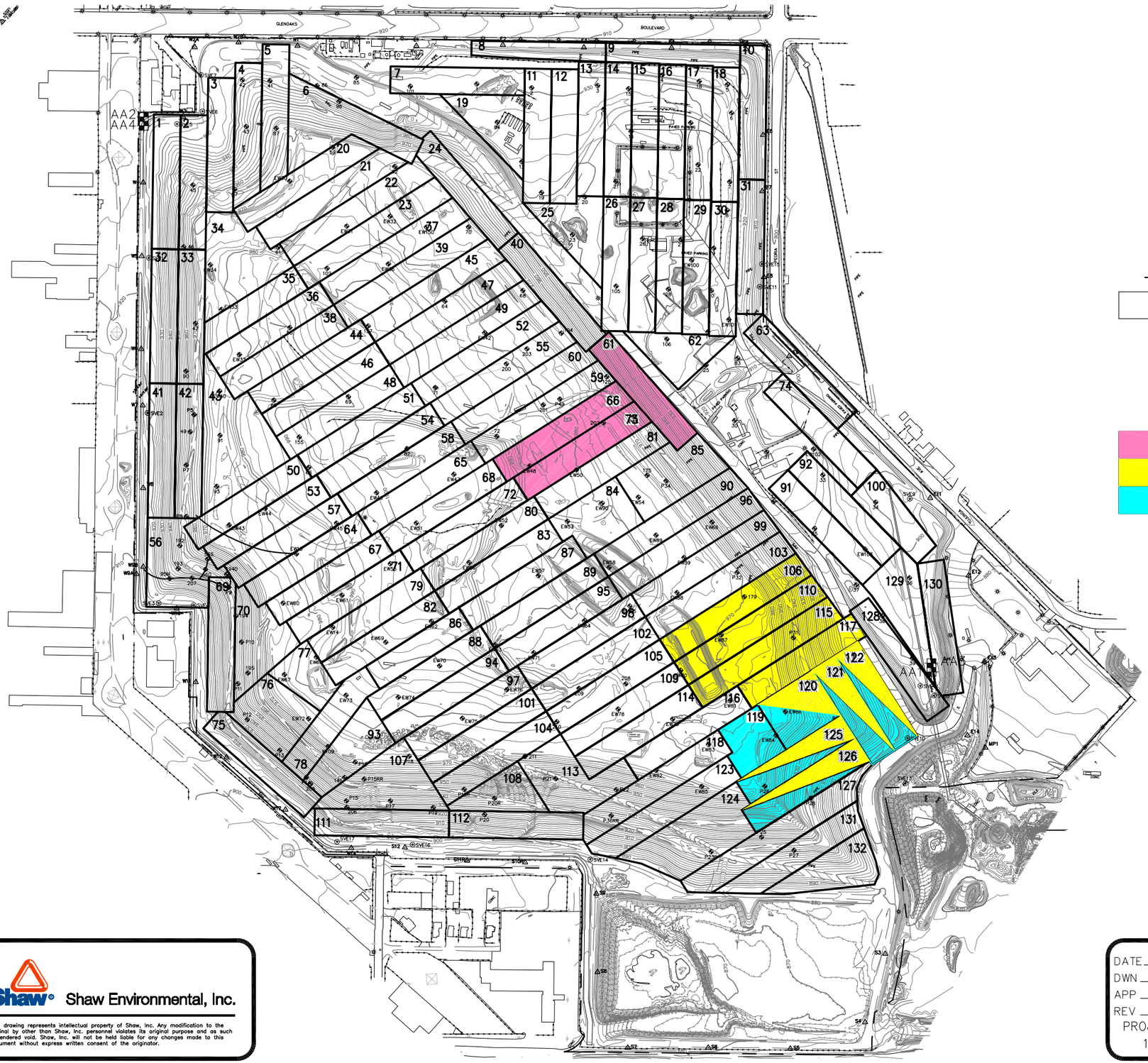
Ten-liter bags, made of Tedlar material, were used to collect integrated samples, and for the collection of the raw gas sample at the main gas conveyance line. Each Tedlar bag, prior to use, is filled with nitrogen for a minimum of 24 hours and checked for leaks. Each used Tedlar bag is purged three times with nitrogen and refilled with nitrogen for a minimum of 24 hours and checked for leaks. Each Tedlar bag is numbered for tracking purposes and each number corresponds with the number of the integrated sampling grid.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

FIGURES



LEGEND

- 179 — VAPOR EXTRACTION WELLS
- PROPERTY BOUNDARY
- 1 — SURFACE EMISSIONS MONITORING GRID
- AA1 — UP WIND SAMPLER
- AA2 — DOWN WIND SAMPLER
- AA3 — DOWN WIND SAMPLER
- AA4 — UP WIND SAMPLER
- ACTIVE FILL AREA JULY 2005
- ACTIVE FILL AREA AUGUST 2005
- ACTIVE FILL AREA SEPTEMBER 2005

NOTES:

1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
2) BACKGROUND TOC READING WAS 5 ppm.
3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
4) AA = AMBIENT AIR MONITORING STATION.

0 400 800

SCALE IN FEET

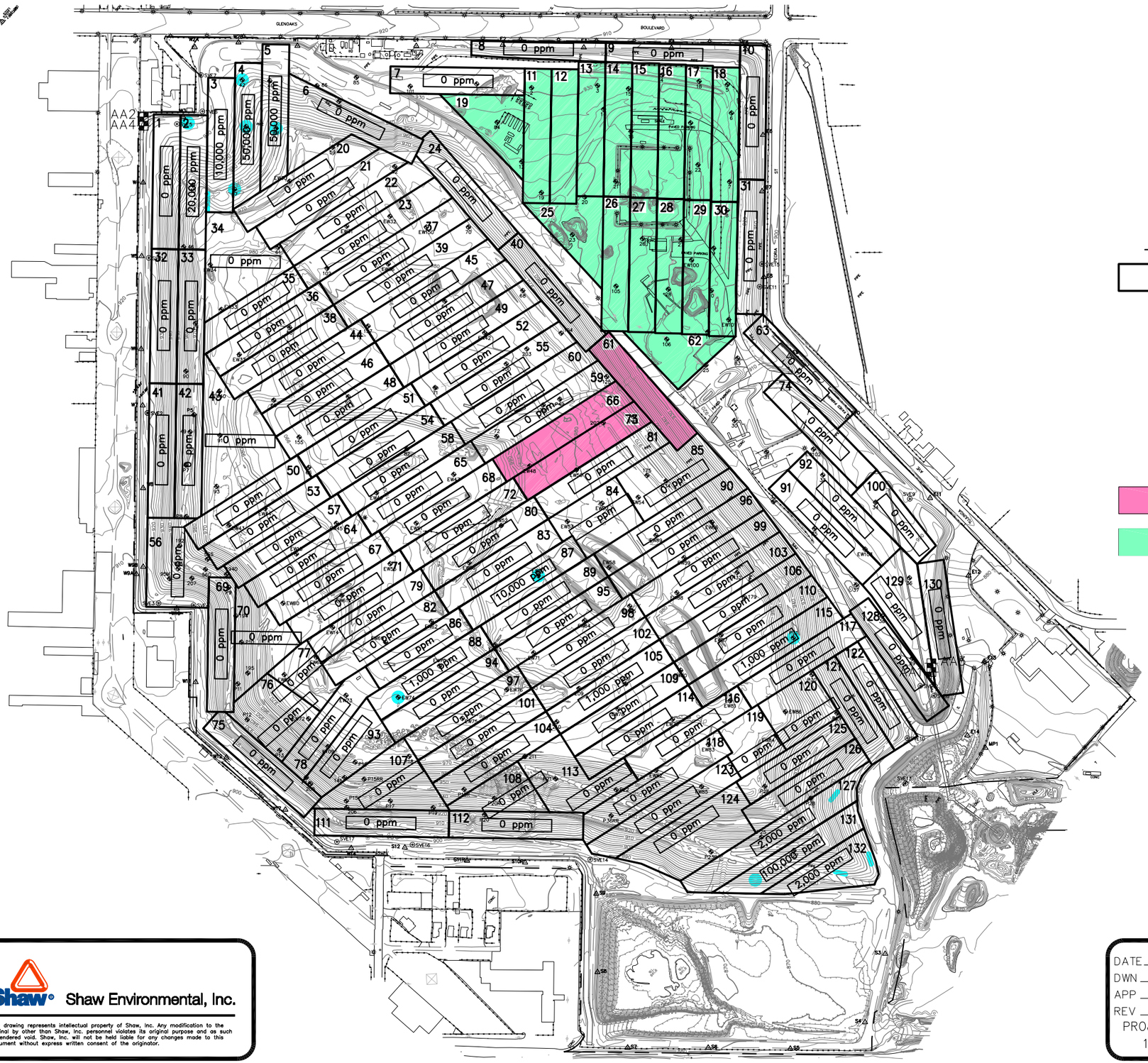
Shaw Environmental, Inc.

DATE 11/08/05
DWN JDT
APP DHT
REV
PROJECT NO. 108341

FIGURE 1
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
3rd QUARTER 2005
SURFACE EMISSIONS MONITORING SITE PLAN

File: N:\Cad\Drawings\Waste Management\Landfills\Bradley LF\053Q\1150FIG1.dwg Layout: Layout1 User: jeremy.totten Nov 07, 2005 - 3:50pm

1" 1/2" 0" 1"



LEGEND

- PROPERTY BOUNDARY
- 0 ppm — INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 — UP WIND SAMPLER
- AA2 — DOWN WIND SAMPLER
- AA3 — DOWN WIND SAMPLER
- AA4 — UP WIND SAMPLER
- READINGS OVER 500 ppm JULY 2005
- ACTIVE AREA, JULY 2005
- GREENWASTE AREAS (NOT MONITORED THIS MONTTH)

NOTES:

1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
2) BACKGROUND TOC READING WAS 5 ppm.
3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
4) AA = AMBIENT AIR MONITORING STATION.
5) GRID 60 NOT MONITORED THIS MONTH DUE TO DRILLING.

0 400 800

SCALE IN FEET

Shaw Environmental, Inc.

DATE 11/8/05
DWN JDT
APP DHT
REV
PROJECT NO. 108341

FIGURE 2A
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
JULY 2005 - 3RD QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS

1" 1/2" 0" 1"

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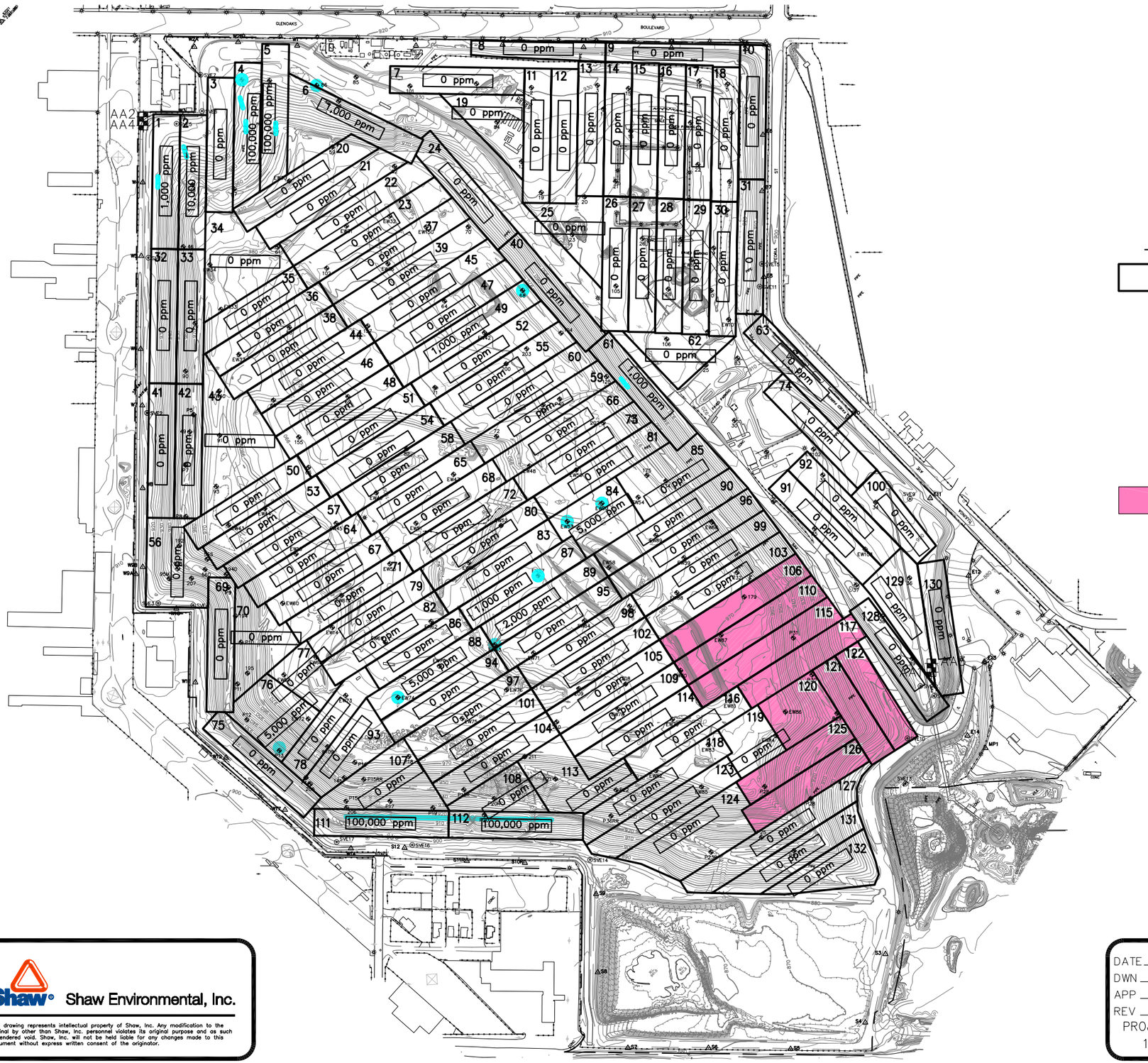


LEGEND

- PROPERTY BOUNDARY
- 0 ppm — INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 — UP WIND SAMPLER
- AA2 — DOWN WIND SAMPLER
- AA3 — DOWN WIND SAMPLER
- AA4 — UP WIND SAMPLER
- READINGS OVER 500 ppm AUGUST 2005
- ACTIVE AREA, AUGUST 2005

NOTES:

1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
2) BACKGROUND TOC READING WAS 5 ppm.
3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
4) AA = AMBIENT AIR MONITORING STATION.

0 400 800

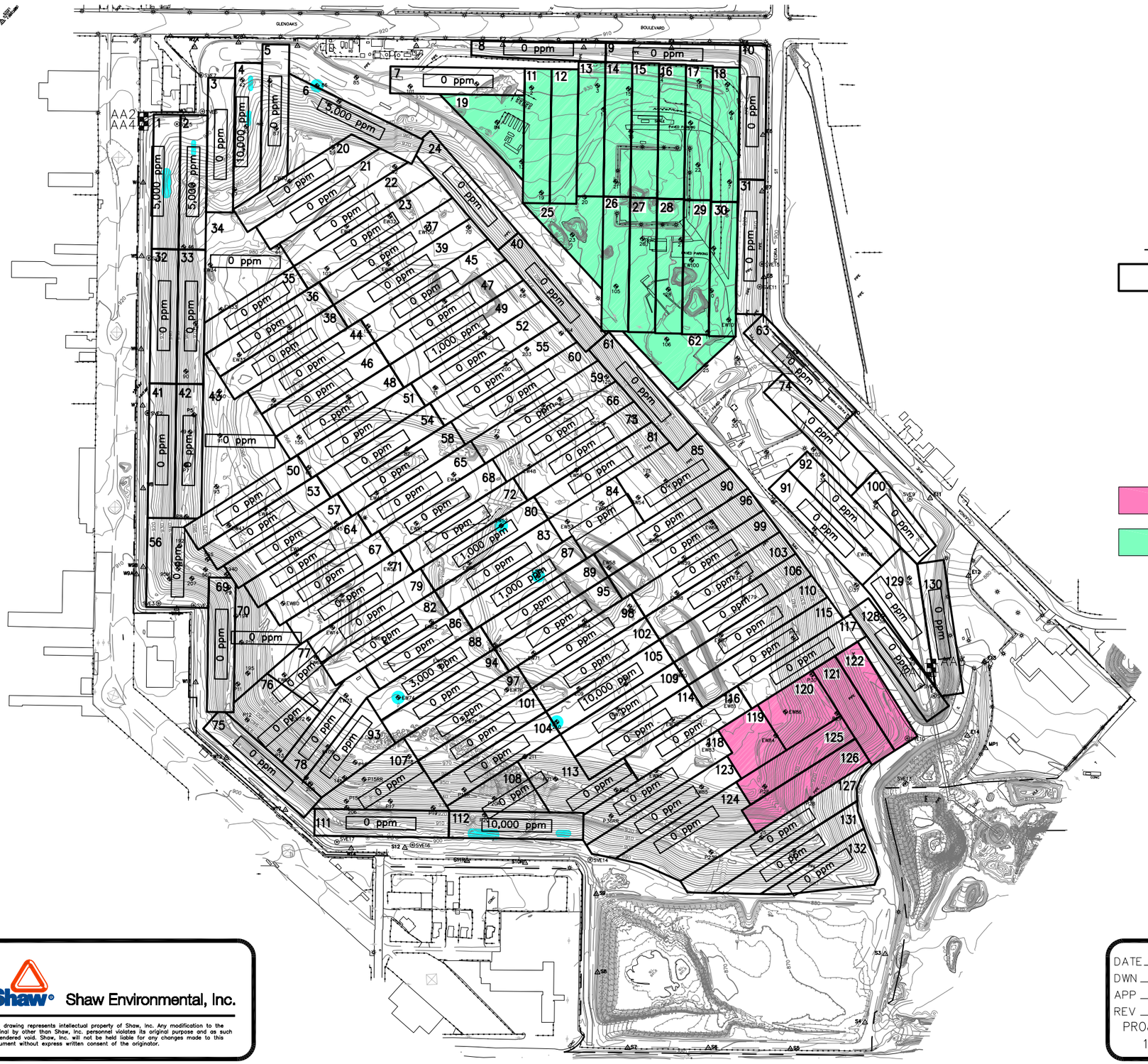
SCALE IN FEET

1" 1/2" 0" 1"

Shaw Environmental, Inc.

DATE 11/8/05
DWN JDT
APP DHT
REV
PROJECT NO. 108341

FIGURE 2B
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
AUGUST 2005 - 3RD QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS



LEGEND

- PROPERTY BOUNDARY
- 0 ppm — INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 — UP WIND SAMPLER
- AA2 — DOWN WIND SAMPLER
- AA3 — DOWN WIND SAMPLER
- AA4 — UP WIND SAMPLER
- READINGS OVER 500 ppm SEPTEMBER 2005
- ACTIVE AREA, SEPTEMBER 2005
- GREENWASTE AREAS

NOTES:

1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
2) BACKGROUND TOC READING WAS 5 ppm.
3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
4) AA = AMBIENT AIR MONITORING STATION.

0 400 800

SCALE IN FEET

Shaw Environmental, Inc.

DATE 11/08/05
DWN JDT
APP DHT
REV
PROJECT NO. 108341

FIGURE 2C
WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA
SEPTEMBER 2005 - 3RD QUARTER 2005
INSTANTANEOUS SURFACE EMISSIONS RESULTS

1" 1/2" 0" 1"

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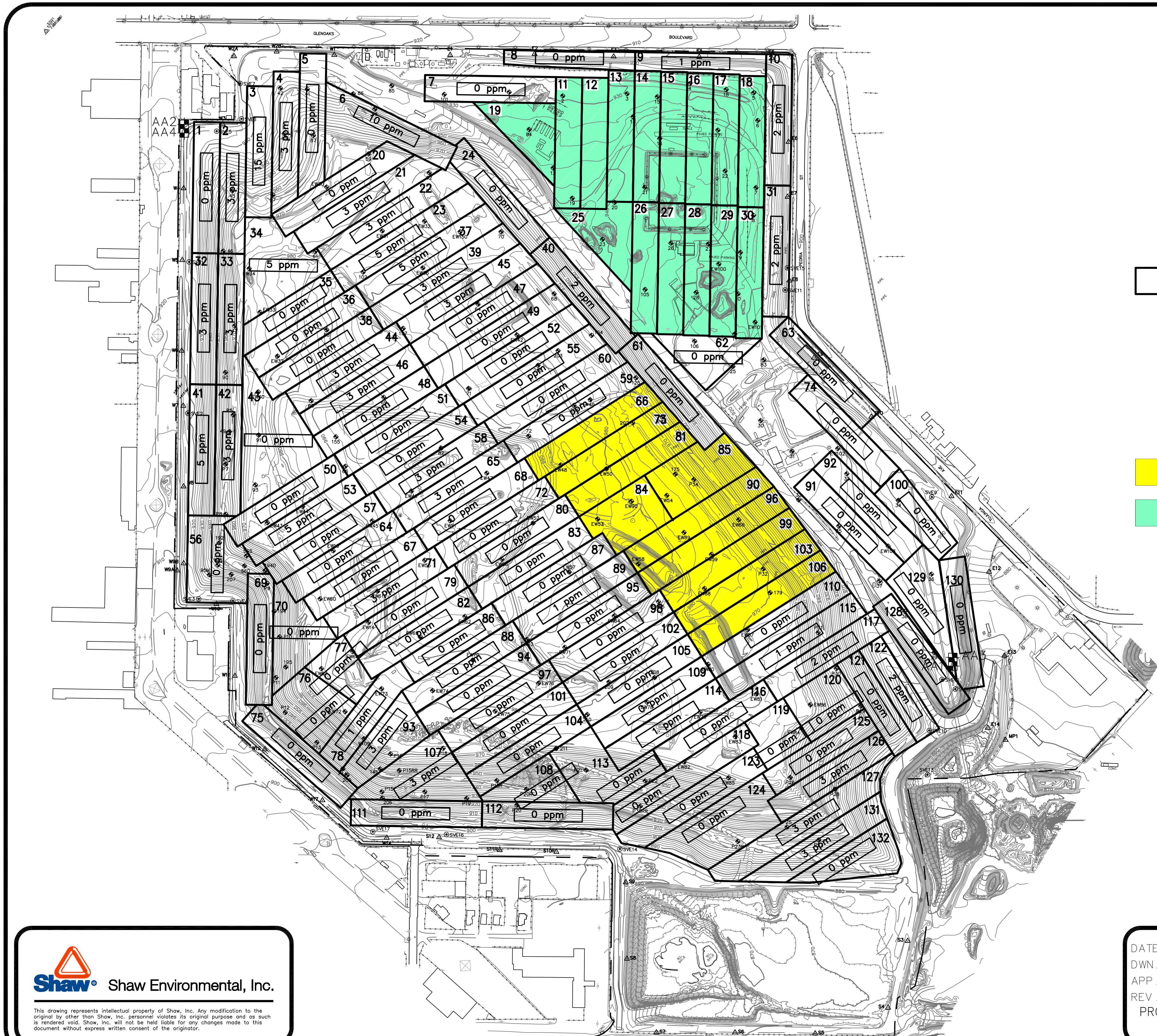


LEGEND

- PROPERTY BOUNDARY
- 5 ppm — INTEGRATED SURFACE SAMPLING GRID
- TOTAL ORGANIC COMPOUNDS (TOC) MEASURED AS METHANE USING ORGANIC VAPOR ANALYZER
- AA1 — UP WIND SAMPLER
- AA2 — DOWN WIND SAMPLER
- AA3 — DOWN WIND SAMPLER
- AA4 — UP WIND SAMPLER
- ACTIVE AREA
- GREENWASTE AREAS

NOTES:

1) ALL TOTAL ORGANIC COMPOUND (TOC) CONCENTRATIONS ARE MEASURED IN PARTS PER MILLION (PPM) AS METHANE.
2) BACKGROUND TOC READING WAS 5 ppm.
3) BRADLEY WEATHER STATION IS LOCATED ATOP THE MAIN OFFICE BUILDING (NOT SHOWN ON MAP) .
4) AA = AMBIENT AIR MONITORING STATION.
5) MAP READINGS ARE CONCENTRATIONS ABOVE BACKGROUND.

0 400 800

SCALE IN FEET

Shaw Environmental, Inc.

DATE	11/08/05
DWN	JDT
APP	DHT
REV	
PROJECT NO.	108341

FIGURE 3

WASTE MANAGEMENT OF CALIFORNIA, INC.
BRADLEY LANDFILL AND RECYCLING CENTER
SUN VALLEY, CALIFORNIA

3rd QUARTER 2005
INTEGRATED SURFACE EMISSIONS RESULTS

File: N:\Cad\Drawings\Waste Management\Landfills\Bradley LF\0530\1150FIG3.dwg Layout: Layout1 User: jeremy.totten Nov 07, 2005 - 4:01pm

1" 1/2" 0" 1"

APPENDIX A

ALTERNATIVE RULE 1150.1 COMPLIANCE PLAN

South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

June 19, 2002

WASTE MANAGEMENT DISPOSAL SVCS OF CAL
9081 TUJUNGA AVE
SUN VALLEY, CA 91352

Attention: SCOTT PIGNAC

RULE 1150.1 COMPLIANCE PLAN

Reference is made to your Application for a Rule 1150.1 Compliance Plan for the following landfill.

Facility ID:	50310	Sector:	PC
Application No:	394147	Phone No:	(818) 767-6180
Common Name:	Bradley Landfill		
Location Address:	9227 TUJUNGA AVE		
City:	SUN VALLEY	, CA	91352-1542

South Coast Air Quality Management District (AQMD) has reviewed your application and approved the alternatives as described in the inserts to the attached Rule 1150.1 requirements for your landfill. Rule 1150.1 Compliance Plans may be submitted by each owner or operator responsible for that section of the rule directly under their control, or by the owner or operator responsible for the entire landfill. Compliance under the alternative provision is achieved if only one owner or operator with responsibility submits a compliance plan for the applicable section of the rule. Only one alternative to each rule requirement shall be allowed for multiple Compliance Plans issued to one landfill, and that alternative shall be written into each Compliance Plan for that landfill. The AQMD reserves the right to deny any or all of these alternatives if it is determined that the alternative(s) allow emissions from the landfill that would not have occurred if the owner or operator were complying with the rule requirements. **This Compliance Plan supercedes all previous plans issued to you for this site. The Municipal Solid Waste (MSW) landfill owner or operator shall comply with this approved Compliance Plan no later than October 1, 2002.**

Where no Rule 1150.1 alternatives are specified, compliance with provisions of Rule 1150.1 is required. You are further advised that other governmental agencies may require approval for the operation of this landfill and it is the responsibility of the applicant to obtain approval from each agency. This compliance plan will remain in force until either a new plan is filed and approved or the applicant is notified by the Executive Officer of revisions to this plan. The AQMD shall not be responsible or liable for any losses resulting from measures required or taken pursuant to the requirements of this approved Rule 1150.1 Compliance Plan.

If you have any questions regarding this matter, please phone Ted Kowalczyk, Air Quality Engineer at (909) 396-2592.

Sincerely,

Jay Chen. P.E.
Senior A.Q. Engineering Manager

cc: Larry Israel
Air Quality Inspector
Revision Number: 3

Alternative Compliance Plan For Bradley Landfill, Issue No. 3

RULE 1150.1. CONTROL OF GASEOUS EMISSIONS FROM MUNICIPAL SOLID WASTE LANDFILLS (Amended March 17, 2000)

TABLE OF CONTENTS

The reference numbers in the left hand margin of the rule refer to sections of 40 CFR, Part 60, Subpart WWW (NSPS)

(a) Purpose

The rule is intended to limit Municipal Solid Waste (MSW) landfill emissions to prevent public nuisance and possible detriment to public health caused by exposure to such emissions.

(b) Applicability

This rule applies to each active and inactive MSW landfill.

(c) Definitions

Terms used but not defined in this rule have the meaning given them in 40 CFR, Part 60, Section 60.751 (Definitions):

(1) ADMINISTRATOR means the Executive Officer of the South Coast Air Quality Management District (District).

(2) ACTIVE LANDFILL means an MSW landfill that has received waste on or after November 8, 1987.

(3) BACKGROUND means the local ambient concentration of total organic compounds (TOC) measured as methane determined by holding the instrument probe approximately 5 to 6 feet above the landfill surface.

(4) CLOSED LANDFILL means a disposal facility that has ceased accepting waste and was closed in accordance with all applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure.

(5) INACTIVE LANDFILL means an MSW landfill where solid waste had been disposed of before November 8, 1987 and no more subsequent solid waste disposal activity has been conducted within the disposal facility.

(6) MSW LANDFILL means an entire disposal facility in a contiguous geographical space where solid waste is placed in or on land. An MSW landfill may be either active or inactive.

(7) OPERATOR means the person:

(A) Operating the MSW landfill, or

(B) Operating the MSW landfill gas collection or control system.

(8) OWNER means the person holding Title to the property.

(9) PERIMETER means the outer boundary of the entire waste disposal property.

(10) PROFESSIONAL ENGINEER means an engineer holding a valid certificate issued by the State of California Board of Registration for

Professional Engineers and Land Surveyors or a state offering reciprocity with California.

(11) TOXIC AIR CONTAMINANT (TAC) means an air contaminant which has been identified as a hazardous air pollutant pursuant to Section 7412 of Title 42 of the United States Code; or has been identified as a TAC by the Air Resources Board pursuant to Health and Safety Code Section 39655 through 39662, or which may cause or contribute to an increase in mortality or an increase in serious illness, or potential hazard to human health.

(d) Active Landfill Design and Operation Requirements

The MSW landfill owner or operator shall comply with the provisions of paragraphs (d)(1) through (d)(11):

(1) If a valid Permit to Construct or Permit to Operate for the collection and control system that meets the requirements of subparagraphs (d)(1)(A) through (d)(1)(C) has not been issued by the District by the adoption date of this rule, submit a site-specific collection and control system design plan. The design plan shall be prepared by a Professional Engineer and sent to the Executive Officer with applications for Permits to Construct or Permits to Operate no later than one year after the adoption of this rule. The Executive Officer shall review the collection and control system design and either approve it, disapprove it, or request that additional information be submitted.

752(b)(2)(i)
752(b)(2)(i)(D)

(A) The collection and control system shall be designed to handle the maximum expected gas flow rate from the entire area of the landfill that requires control, to minimize migration of subsurface gas to comply with paragraph (d)(4), and to collect gas at an extraction rate to comply with paragraphs (d)(5) and (d)(6). For the purposes of calculating the maximum expected gas generation flow rate from the landfill, one of the equations in 40 CFR, Part 60, Section 60.755(a)(1) shall be used. Another method may be used to determine the maximum gas generation flow rate, if the method has been approved by the Executive Officer.

752(b)(2)(ii)(A)(*1*), (*3*), (*4*)
755(a)(1)
758(b)(1)(i)

(B) If a valid Permit to Construct or Permit to Operate has not been issued by the District for the collection and control system, the collection and control system design plan shall either conform with

752(b)(2)(i)(C)
756(e)

specifications for active collection systems in 40 CFR, Part 60, Section 60.759 or include a demonstration to the Executive Officer's satisfaction of the sufficiency of the alternative provisions describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i).

(C) The design plan shall provide for the control of collected MSW landfill emissions through the use of a collection and control system meeting the applicable requirements in clauses (d)(1)(C)(i) and (d)(1)(C)(ii):

752(b)(2)(iii)

(i) Route all the collected gas to a control system designed and operated to either reduce NMOC by at least 98 percent by weight or reduce the outlet NMOC concentration to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen. The required reduction efficiency or ppmv shall be established by an initial source test, required under 40 CFR, Part 60, Section 60.8 and **annually** thereafter using the test methods specified in paragraph (j)(1). The annual source test shall be conducted no later than 45 days after the anniversary date of the initial source test.

ALTERNATIVE: THE FOLLOWING FREQUENCY SHALL BE USED FOR SOURCE TESTING IDENTICAL FLARES LISTED ON ONE PERMIT TO OPERATE WHERE IDENTICAL MEANS, BUT IS NOT LIMITED TO:

MAKE AND MODEL, BURNERS, OPERATIONAL SETTINGS, MAINTENANCE AND FUELS.

SINGLE BACKUP FLARE- AFTER EVERY 4000 HOURS OF OPERATION.

MULTIPLE BACKUP FLARES - ONE FLARE AFTER EVERY 4000 HOURS OF CUMULATIVE BACKUP OPERATION FOR ALL FLARES LISTED ON THE PERMIT TO OPERATE. ALTERNATE TESTING OF THE FLARES SUCH THAT EACH FLARE IS TESTED.

NON-BACKUP FLARES: AT LEAST ONE FLARE EVERY YEAR AND THEN ALTERNATE ALL OTHERS SUCH THAT EACH IS SOURCE TESTED AT LEAST ONCE EVERY THREE YEARS.

(I) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone. Where the landfill gas is the primary fuel for the boiler or process heater, introduction of the landfill gas stream into the flame zone is not required.

(II) The control device shall be operated within the **operating parameter ranges** established during the initial or most recent compliant source test. The operating parameters to be monitored are specified under paragraph (e)(6).

(ii) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of clause (d)(1)(C)(i).

(2) Install and operate the collection and control system no later than 18 months after the submittal of the design plan. 752(b)(2)(ii)

(3) If the District has not issued prior written approval for subsurface refuse boundary sampling probes, design and install subsurface refuse boundary sampling probes as specified in Section 1.1, Attachment A, to determine whether landfill gas migration exists. Installation of the refuse boundary probes shall be no later than 18 months after the submittal of the collection and control design plan as specified in paragraph (d)(1).

ALTERNATIVE: THE SUBSURFACE REFUSE BOUNDARY PROBES APPROVED IN THE PAST OR SUBMITTED WITH THIS APPLICATION, ARE APPROVED. ALL FUTURE DESIGNS AND INSTALLATIONS NOT MEETING THE RULE REQUIREMENTS, SHALL BE SUBMITTED FOR AQMD PRE-CONSTRUCTION APPROVAL WITH A COMPLIANCE PLAN APPLICATION.

(4) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding five percent by volume in the subsurface refuse boundary sampling probes constructed for the purposes of detecting lateral migration of landfill gas away from the waste mass, as determined from collected samples.

ALTERNATIVE: EXCEPT PROBE E-8-D (AS IDENTIFIED ON "FIGURE 1. SITE PLAN OF BRADELY EAST LANDFILL IN VICINITY OF PROBE E-8" – 12/5/01).

(5) Operate the collection system to prevent the concentration of TOC measured as methane from exceeding 50 ppmv as determined by integrated samples taken on numbered 50,000 square foot landfill grids.

(6) Operate the collection system to prevent the concentration of TOC
753(d) measured as methane from exceeding 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill, except at the outlet of any control device.

(7) Operate the control or treatment system at all times when the collected gas is routed to the system. In the event the collection, treatment or control
753(e) system is inoperable, the gas conveying system shall be shut down and all valves in the collection, treatment and control system contributing to venting of the gas to the atmosphere shall be closed no later than one hour after such breakdown or no later than one hour after the time the owner or operator knew or reasonably should have known of its occurrence.

(8) Operate the collection, treatment and control system until all the
752(b)(2)(V) exemption criteria under subdivision (k) has been met and the reports specified in subparagraph (f)(2)(D) have been submitted to the Executive Officer.

(9) Design, install and operate a wind speed and direction monitoring system with a continuous recorder of the requirements in subparagraphs (d)(9)(A)

and (d)(9)(B), at a site which is representative of the wind speed and direction in the areas being sampled. The wind velocity shall be recorded throughout the sampling period. The wind direction transmitter shall be oriented to true north using a compass. The monitor shall be installed according to the criteria set forth in 40 CFR, Part 50.

(A) For wind speed use a 3 cup assembly, with a range of 0 to 50 miles per hour, with a threshold of 0.75 mile per hour or less.

(B) For wind direction use a vane, with a range of 0 to 540 degrees azimuth, with a threshold of plus-minus 2 degrees.

(10) Comply with the requirements of Section 21140 – Final Cover, of California Code of Regulations Title 27, Subchapter 5 – Closure and Post-Closure Maintenance, upon closure of a MSW landfill unit, incorporated herein as Attachment B.

(11) Comply with the requirement of Section 20200 – State Water Resources Conservation Board (SWRCB) Applicability and Classification Criteria of California Code of Regulations Title 27, Article 2 – SWRCB, Waste Classification and Management, with respect to the disposal of liquids and semi-solid waste at Class III landfills, incorporated herein as Attachment C.

(e) Active Landfill Sampling and Monitoring Requirements

The MSW landfill owner or operator shall comply with the provisions of paragraphs (e)(1) through (e)(6), after installation of the landfill gas control system:

(1) Monitor and collect samples for analysis as specified in Section 1.0, Attachment A, to **determine the concentrations of TOC and TAC each month** from the subsurface refuse boundary sampling probes, to assure continued compliance. Any measurement of 5 percent TOC by volume or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(1)(A) through (e)(1)(C) shall be taken.

ALTERNATIVE: PROBE E-8-D* ONLY, IN LIEU OF COMPLYING WITH PARAGRAPH (d)(4), OR (e)(1)(A-C) WITH RESPECT TO EXCEEDANCES, MONITOR INSTANTANEOUSLY GRID 31 D* PURSUANT TO SECTION 3.0, ATTACHMENT A. THE OPERATOR SHALL RECORD, MAINTAIN AND REPORT THE RESULTS OF THIS MONITORING PURSUANT TO

SUBDIVISION (f). *IDENTIFIED IN "FIGURE 1. SITE PLAN OF BRADELY EAST LANDFILL IN VICINITY OF PROBE E-8" – 12/5/01.

(A) The probe shall be identified and the location recorded as specified in Section 1.6, Attachment A.

(B) Adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of the probe with the exceedance shall be made and the probe resampled no later than 10 calendar days after detecting the exceedance.

(C) If the resampling of the probe shows a second exceedance, additional corrective action shall be taken and the probe shall be resampled again no later than 10 calendar days after the second exceedance. If the resampling shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

(2) Collect **monthly integrated** samples for analysis as specified in Section 2.0, Attachment A, **to determine the concentrations of TOC and TAC** from the landfill surface, to assure continued compliance. Any reading of 50 ppmv or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(2)(A) through (e)(2)(C) shall be taken.

ALTERNATIVE: THE LANDFILL SAMPLING GRIDS ARE DIVIDED INTO THREE TYPES: "A", "B" AND "C". QUARTERLY FOR TYPE "A" AND "B" GRIDS. ANNUALLY FOR TYPE "C" GRIDS.

(A) The grid shall be identified and the location recorded as specified in Section 2.8, Attachment A.

(B) Cover maintenance or adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of the grid with the exceedance shall be made and the grid resampled no later than 10 calendar days after detecting the exceedance. If measurable precipitation occurs within the 10 calendar days, all resampling and analysis shall comply with Section 2.2.2, Attachment A.

(C) If the resampling of the grid shows a second exceedance, additional corrective action shall be taken and the grid shall be resampled again no later than 10 calendar days after the second exceedance. If the resampling shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

(3) Monitor instantaneously as specified in Section 3.0, Attachment A, to **determine the concentration of TOC each calendar quarter**, to assure continued compliance. Any reading of 500 ppmv TOC or greater shall be recorded as an exceedance and the actions specified in subparagraphs (e)(3)(A) through (e)(3)(C) shall be taken. Any closed landfill that has no monitored exceedances of the 500 ppmv standard in three consecutive quarterly monitoring periods may monitor annually. Any reading of 500 ppmv TOC or more above background detected during the annual monitoring or compliance inspections shall result in a return to quarterly monitoring for that landfill.

755(c)
756(f)

ALTERNATIVE: THE LANDFILL MONITORING GRIDS ARE DIVIDED INTO THREE TYPES: "A", "B" AND "C".

QUARTERLY FOR TYPE "A" AND "B" GRIDS.

QUARTERLY FOR "C" WELL HEADS, POLES, AND OTHER STRUCTURES PROTRUDING INTO THE REFUSE.

ANNUALLY FOR THE SURFACE OF TYPE "C" GRIDS.

(A) The location of each monitored exceedance shall be marked on the landfill or identified by using a global positioning system and the location recorded as specified in Section 3.4, Attachment A.

(B) Cover maintenance or adjustments to the vacuum of adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored no later than 10 calendar days after detecting the exceedance.

(C) If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be remonitored again no later than 10 days after the second exceedance. If the remonitoring shows a third exceedance, it is a violation unless the owner or operator determines that a new or replacement gas collection well is needed. The owner or operator must install and operate the new or replacement well no later than 45 days after detecting the third exceedance.

(4) Collect a **monthly** landfill gas sample for analysis as specified in Section 4.0, Attachment A, to **determine the concentrations of TOC and TAC** from the main gas collection header line entering the gas treatment and/or gas control systems.

ALTERNATIVE: QUARTERLY

(5) Collect **monthly** ambient air samples for analysis as specified in Section 5.0, Attachment A, to **determine the concentrations of TOC and TAC** from the landfill property boundary.

ALTERNATIVE: QUARTERLY

(6) Monitor the collection and control system equipment specified under subparagraphs (e)(6)(A) and (e)(6)(B) in order to comply with subparagraph (d)(1)(C).

(A) For an enclosed combustor install, calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment: 756(b)

(ii) A temperature monitoring device equipped with a continuous recorder and having an accuracy of plus-minus 1 percent of the temperature being measured expressed in degrees Celsius or Fahrenheit. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.

(iii) At least one gas flow rate measuring device that shall record the flow to the control device(s) at least every 15 minutes.

(B) For a device other than an enclosed combustor, demonstrate compliance with subparagraph (d)(1)(C) by providing information satisfactory to the Executive Officer describing the operation of the 756(d)

control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. Alternatives to this rule shall be submitted as specified in subdivision (i). The Executive Officer may specify additional appropriate monitoring procedures.

(f) Active Landfill Recordkeeping and Reporting Requirements

758(a) The MSW landfill owner or operator shall keep all records up-to-date, readily accessible and maintained for at least a period of 5 years and made available to District staff upon request. Records older than 2 years may be maintained off-site, if they are retrievable no later than 4 hours after request.

(1) The records required in subparagraphs (f)(1)(A) through (f)(1)(H) shall be maintained at the facility.

758(b) (A) For the life of the control equipment as measured during the initial source test or compliance determination:

(i) The control device vendor specifications.

(ii) The maximum expected gas generation flow rate as calculated in subparagraph (d)(1)(A).

(iii) When seeking to demonstrate compliance with subparagraph (d)(1)(C) through the use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(I) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the source test.

ALTERNATIVE: FOR FLARE(S), CONTINUOUSLY RECORD THE INSTANTANEOUS COMBUSTION TEMPERATURE.

(II) The reduction of NMOC determined as specified in clause (d)(1)(C)(i) achieved by the control device.

(iv) When seeking to demonstrate compliance with subclause (d)(1)(C)(i)(I) through the use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or

process heater over the same time period of the source testing.

(B) The data required to be recorded under Section 1.6, Attachment A, for subsurface refuse boundary sampling probes and all remedial actions taken for exceedances of the 5 percent TOC standard required in paragraph (d)(4).

(C) The data required to be recorded under Section 2.8, Attachment A, for integrated samples and all remedial actions taken for exceedances of the 50 ppmv TOC standard required in paragraph (d)(5).

(D) The data required to be recorded under Section 3.4, Attachment A, for instantaneous monitoring and all remedial actions taken for exceedances of the 500 ppmv TOC standard required in paragraph (d)(6).

758(e)

(E) The data required to be recorded under Section 4.5, Attachment A, for landfill gas samples collected from the main gas collection header line entering the gas treatment and/or gas control systems.

(F) The data required to be recorded under Section 5.7, Attachment A, from ambient air collected at the landfill property boundary.

(G) A description and the duration of all periods when the collection, treatment or control device was not operating for a period exceeding one hour and the length of time the system was not operating.

757(f)(3)

(H) Continuous records of the equipment operating parameters specified to be monitored under paragraph (e)(6) as well as records for periods of operation during which the parameter boundaries established during the most recent source test are exceeded.

758(c)

(i) The following constitute exceedances that shall be recorded:

(I) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28° C (82° F) below the average

combustion temperature during the most recent source test at which compliance with subparagraph (d)(1)(C) was determined.

ALTERNATIVE: FOR FLARES, ALL 3-HOUR PERIODS OF OPERATION DURING WHICH THE INSTANTANEOUS COMBUSTION TEMPERATURE WAS MORE THAN 28 DEGREES C (82 DEGREES F) BELOW THE AVERAGE COMBUSTION TEMPERATURE DURING THE MOST RECENT SOURCE TEST AT WHICH COMPLIANCE WITH SUBPARAGRAPH (D)(1)(C) WAS DETERMINED.

FOR BOILERS THIS REQUIREMENT IS NOT APPLICABLE.

(II) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under clause (f)(1)(A)(iv).

(ii) Records of the indication of flow to the control device specified under paragraph (e)(6)(A)(ii).

(iii) Each owner or operator who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with subparagraph (d)(1)(C) shall keep records of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.)

(2) The reports required in subparagraphs (f)(2)(A) through (f)(2)(D) shall be submitted to the Executive Officer (Either paper copy or electronic formats are acceptable).

(A) The initial source test report no later than 180 days after start-up and each succeeding complete annual source test report no later

than 45 days after the anniversary date of the initial source test, for all control systems required in subparagraph (d)(1)(C).

(B) A report no later than 45 days after the last day of each calendar quarter with the information required in clauses (f)(2)(B)(i) and (f)(2)(B)(ii).

(i) All exceedances of the emission standards required in paragraphs (d)(4), (d)(5) and (d)(6) in the format required under Sections 1.6, 2.8 and 3.4, Attachment A. All exceedance resampling/remonitoring and each corrective action required under paragraphs (e)(1), (e)(2) and (e)(3). If there are no exceedances, submit a letter stating there were no exceedances for that quarter.

(ii) All TAC analyses required in paragraphs (e)(1) through (e)(5).

(C) A closure report to the Executive Officer no later than 30 days after waste acceptance cessation. The Executive Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR, Part 258, Section 258.60 or the applicable federal, state and local statutes, regulations, and ordinances in effect at the time of closure. If a closure report has been submitted to the Executive Officer, no additional wastes shall be placed into the landfill without filing a notification of modification as described under 40 CFR, Part 60, Section 60.7(a)(4).

757(d)

(C) A decommissioning report to the Executive Officer 30 days prior to well capping, removal or cessation of operation of the collection, treatment or control equipment. The decommissioning report shall contain all of the items as specified in clauses (f)(2)(D)(i) through (f)(2)(D)(iii):

757(e)

(i) A copy of the closure report submitted in accordance with subparagraph (f)(2)(C).

(ii) A copy of the initial source test report demonstrating that the collection and control system has been installed a minimum of 15 years.

(iii) All records needed to verify the landfill meets the exemption criteria under subdivision (k).

(g) Active Landfill Compliance Schedule

The MSW landfill owner or operator shall comply with the active landfill requirements of this rule or submit alternatives to this rule as specified in subdivision (i) no later than 90 days after April 10, 1998. Rule 1150.1 Compliance Plans previously submitted to the District shall remain in effect during the 90 days after April 10, 1998, or until the owner or operator has received an approved alternative Rule 1150.1 Compliance Plan submitted as specified in subdivision (i).

(h) Inactive Landfill Requirements

The MSW landfill owner or operator shall comply with either the applicable requirements in paragraphs (h)(1) and (h)(2) or submit alternatives to this rule as specified in subdivision (i).

(1) Inactive landfills that have a landfill gas collection system shall meet all of the active landfill requirements. For those inactive landfills without a gas collection system and determined to need one, meet all of the active landfill requirements, except the collection and control system design plan and applications for permits shall be submitted no later than one year after notification by the Executive Officer.

(2) Inactive landfills without a gas collection system:

(A) Upon discovery of TOC measured as methane exceeding 500 ppmv at any location on the landfill surface, apply mitigation measures such as compaction, additional cover, and/or watering to reduce the emissions to less than 500 ppmv. The procedure used for measurement of TOC shall meet the requirements of Section 3.0, Attachment A.

(B) Submit the following Data and/or meet the required action in paragraph (h)(1):

(i) At any time after the adoption of this rule, but not later than 30 days after the receipt of a request, submit to the Executive Officer a screening questionnaire pursuant to California Air Resources Board Health and Safety Code (H & S) 41805.5.

determine the efficiency of the control system in reducing NMOC by at least 98 percent by weight. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The equation in subparagraph (j)(1)(B) shall be used to calculate efficiency.

(B) U.S. EPA Reference Method 25, 40 CFR, Part 60, Appendix A shall be used to determine the efficiency of the control system in reducing the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3 percent oxygen. Until, but not after District Method 25.3 has met equivalency as specified in paragraph (j)(2), U.S. EPA Reference Method 18, 40 CFR, Part 60, Appendix A may be used for this source test. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (NMOC_{in} - NMOC_{out})/(NMOC_{in})$$

where,

$NMOC_{in}$ = mass of NMOC entering control device

$NMOC_{out}$ = mass of NMOC exiting control device

(2) Equivalent Test Methods

Any other method demonstrated to be equivalent and approved in writing by the Executive Officers of the District, the California Air Resources Board (CARB), and the Regional Administrator of the United States Environmental Protection Agency (U.S. EPA), Region IX, or their designees, may be used to determine compliance with this rule.

(k) Exemptions

An MSW landfill may be temporarily exempt from all or any portion of the requirements of this rule if the owner or operator can demonstrate to the Executive Officer that the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(4). Temporary exemption may be independently determined by the Executive Officer, if the MSW landfill emissions meet the requirements of paragraphs (k)(1) through (k)(4). MSW landfills issued temporary exemption

letters by the Executive Officer shall remain exempt, subject to periodic review, provided:

(1) The MSW landfill complies with the requirements of paragraphs (d)(4), (d)(5) and (d)(6).

(2) The MSW landfill emits less than 55 tons per year of NMOC as specified in 40 CFR, Part 60, Section 60.752(b) or, for a closed landfill, as specified in 40 CFR, Part 60, Section 60.752(b)(2)(v)(C).

752(b)

(3) The MSW landfill constitutes an insignificant health risk. In making this determination the Executive Officer shall consider the listed factors in subparagraphs (k)(3)(A) through (k)(3)(G). Where not specified, in evaluating the cancer risks and hazard indexes, the Executive Officer shall be guided by the definitions in District Rule 1401 - New Source Review of Carcinogenic Air Contaminants, and Rule 1402 - Control of Toxic Air Contaminants From Existing Sources.

(A) The proximity to, and any adverse impacts on, residences, schools, hospitals or other locations or structures which have children, or elderly or sick persons.

(B) The emission migration beyond the landfill property boundary.

(C) The complaint history.

(D) The age and closure date.

(E) The amount and type of waste deposited.

(F) That the emissions of carcinogenic air contaminants, specified in Table 1, Attachment A, from the landfill will not result in a maximum individual cancer risk greater than one in one million (1×10^{-6}) at any receptor location.

(G) That the emissions of TAC, specified in Table 1, Attachment A, from the landfill will not result in a total acute or chronic Hazard Index of greater than 1.

(4) The MSW landfill is in compliance with District Nuisance Rule 402.

Such temporary exemption shall be reviewed periodically by the Executive Officer, to consider the land use surrounding the landfill and gaseous emissions, and the impact on the public. Depending upon the results of the review, the Executive Officer may extend or terminate the exemption.

(l) Loss of Exemption

If an MSW landfill should have its temporary exemption terminated, the owner or operator shall comply with the active landfill requirements of this rule.

ATTACHMENT A

1.0 SUBSURFACE REFUSE BOUNDARY SAMPLING PROBES
Paragraph (d)(4) and (e)(1) Requirements of Rule 1150.1

1.1 Subsurface Probe Design and Installation

Landfills which are subject to Rule 1150.1 must install and maintain a subsurface refuse boundary probe sampling system of adequate design to determine if gas migration exists for the ultimate purpose of preventing surface emissions. The California Integrated Waste Management Board also requires the installation of refuse boundary probes for purposes of detecting and ultimately preventing subsurface migration of landfill gas past the permitted property boundary of the landfill/disposal site as well as the prevention of the accumulation of landfill gas in on-site structures. It is the District's intent that the subsurface refuse boundary probes required by paragraph (d)(3) of Rule 1150.1 be designed and installed in such a manner as to comply with the requirements of the California Integrated Waste Management Board (whenever possible) and Sections 1.1.1 through 1.1.4.

1.1.1 The probes shall be installed within the landfill property line and outside the refuse disposal area.

1.1.2 Wherever accessible, the **probes shall be located no further than 100 feet from the refuse boundary.**

ALTERNATIVE: WHEREVER ACCESSIBLE AND THE PROBES ARE GREATER THAN 100 FEET FROM THE REFUSE, MONITOR INSTANTANEOUSLY FROM THE REFUSE BOUNDARY TO THE PROBE, USING THE GRID METHOD EVERY QUARTER AND WHEN PROBES EXCEED 2% TOC.

1.1.3 The spacing between probes shall be based on the adjacent land use no further than 1320 feet (1/4 mile) from the refuse boundary and shall be determined as follows:

LAND USE	SPACING
Residential/Commercial	100 feet
Public Access	500 feet
Undeveloped Open Space, (No Public Access)	650 feet
Landfill with Liners	1000 feet

1.1.4 Each probe shall be capped, sealed, have a sampling valve and be of multiple-depth design for which the depth shall be determined based on the depth of refuse no further than 500 feet from the probe as follows:

First Depth	10 feet below surface.
Second Depth	25% of refuse depth or 25 feet below surface, whichever is deeper.
Third Depth	50% of refuse depth or 50 feet below surface, whichever is deeper.
Fourth Depth	75% of refuse depth or 75 feet below surface, whichever is deeper.

Second, third, or fourth depth probes may be deleted if the required depth of such probe is deeper than the depth of the refuse.

1.2 Number of Samples

All refuse boundary gas probes at each depth shall be monitored monthly for TOC measured as methane using a portable flame ionization detector (FID) meeting the requirements of Section 3.2 and with a tube connected to the probe sampling valve. In addition, samples shall be taken as specified in Section 1.2.1 or 1.2.2 to determine the concentration of both TOC and TAC. The Executive Officer may require additional probes to be sampled upon written request.

1.2.1 If the TOC concentration measured with the FID does not exceed 5% by volume in any of the probes, collect one bag sample from one probe with the highest concentration, or

1.2.2 If the TOC concentration measured with the FID for any of the probes exceeds 5% by volume, collect one bag sample per probe from the probes with the highest concentrations above 5% by volume, from at least five probes.

1.3 Subsurface Refuse Boundary Probe Sampling Procedure

1.3.1 Prior to collecting gas samples, evacuate the probe (the probes must be sealed during evacuation) until the TOC concentration remains constant for at least 30 seconds.

1.3.2 The constant **TOC concentration shall be measured using an FID** that meets the requirements in Section 3.2.

ALTERNATIVE: PORTABLE ANALYZERS ON AN APPROVED LIST OF EQUIPMENT MAINTAINED BY THE AQMD MAY BE

USED AS ALTERNATIVES FOR THE SAMPLER/INSTRUMENT REQUIREMENTS OF THIS RULE.

1.3.3 Collect approximately a **10-liter** gas sample in a Tedlar (Dupont trade name for polyvinyl) bag or equivalent container over a continuous ten-minute period using the evacuated container sampling procedure described in Section 7.1.1 of EPA Method 18 or direct pump sampling procedure described in Section 7.1.2 of EPA Method 18. The container shall be LIGHT-SEALED.

1.4 Subsurface Refuse Boundary Probe Analytical Procedures

All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

1.5 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

1.6 Recording the Results

1.6.1 Record the volume concentration of TOC measured as methane for each individually identified refuse boundary probe (at each depth) and the volume concentration of TAC for selected probes on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the refuse boundary probes and the gas collection system clearly marked and identified.

1.6.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

2.0 INTEGRATED LANDFILL SURFACE SAMPLING
Paragraph (d)(5) and (e)(2) Requirements of Rule 1150.1

2.1 Number of Samples

The number of samples collected will depend on the area of the landfill surface. The entire landfill disposal area shall be divided into individually identified 50,000 square foot grids. One monthly sample shall be collected from each grid for analysis. Any area that the Executive Officer deems inaccessible or dangerous for a technician to enter may be excluded from the sampling grids monitored by the landfill owner or operator. **To exclude an area from monitoring, the landfill owner or operator shall file a written request with the Executive Officer. Such a request shall include an explanation of the requested exclusion and photographs of the area. The Executive Officer shall notify the landfill owner or operator in writing of the decision.** Any exclusion granted shall apply only to the monitoring requirement. The 50 ppmv limit specified in paragraph (d)(5) of Rule 1150.1 applies to all areas.

ALTERNATIVE: SAMPLING IS NOT REQUIRED FOR THE FOLLOWING LANDFILL SURFACES: PORTIONS OF SLOPES 30 DEGREES AND GREATER, PAVED SURFACES EXCEPT FOR CRACKS, THE ACTIVE WORKING FACE, THE MAIN HAUL ROAD AND TEMPORARY STOCKPILES FIVE (5) FEET OR MORE IN HEIGHT. A TEMPORARY STOCKPILE DOES NOT INCLUDE A CLOSED LANDFILL FINAL COVER OR CAP.

2.2 Integrated Surface Sampling Conditions

2.2.1. The average wind speed during this sampling procedure shall be five miles per hour or less. Surface sampling shall be terminated when the average wind speed exceeds five miles per hour or the instantaneous wind speed exceeds ten miles per hour. Average wind speed is determined on a 15-minute average.

2.2.2. **Surface sampling shall be conducted when the landfill is dry. The landfill is considered dry when there has been no measurable precipitation for the preceding 72 hours prior to sampling.** Most major newspapers report the amount of precipitation that has fallen in a 24-hour period throughout the Southern California area. Select the nearest reporting station that represents the landfill location or provide for measurable precipitation collection at the MSW landfill wind monitoring station.

2.3 Integrated Surface Sampler Equipment Description

An integrated surface sampler is a portable self-contained unit with its own internal power source. The integrated sampler consists of a stainless steel collection probe, a rotameter, a pump, and a **10-liter Tedlar bag** enclosed in a LIGHT-SEALED CONTAINER to prevent photochemical reactions from occurring during sampling and transportation. The physical layout of the sampler is shown in Figure 1.

An alternate integrated surface sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 2.4 and shown in Figure 1. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

ALTERNATIVE: PORTABLE ANALYZERS ON AN APPROVED LIST OF EQUIPMENT MAINTAINED BY THE AQMD MAY BE USED AS ALTERNATIVES FOR THE SAMPLER/INSTRUMENT REQUIREMENTS OF THIS RULE.

2.4 Integrated Surface Sampler Equipment Specifications

2.4.1 Power: Batteries or any other power source.

2.4.2 Pump: The diaphragm shall be made of non-lubricated Viton (Dupont trade name for co-polymer of hexafluoropropylene and vinylidene fluoride) rubber.

2.4.3 Bag: One 10-liter Tedlar bag with a valve. The Tedlar bag shall be contained in a LIGHT-SEALED CONTAINER. The valve shall be leak free and constructed of aluminum, stainless steel, or non-reactive plastic with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.

2.4.4 Rotameter: The rotameter shall be made of borosilicate glass or other non-reactive material and have a flow range of approximately 0-to-1 liter per minute. The scale shall be in milliliters or an equivalent unit. The graduations shall be spaced to facilitate accurate flow readings.

2.4.5 Air Flow Control Orifice: Needle valve in the rotameter.

2.4.6 Funnel: 316 stainless steel.

2.4.7 Fittings, Tubing and Connectors: 316 stainless steel or Teflon.

2.5 Integrated Surface Sampling Procedure

2.5.1 An integrated surface sampler as described in Section 2.4 shall be used to collect a surface sample approximately 8-to-10 liters from each grid.

2.5.2 During sampling, the probe shall be placed 0-to-3 inches above the landfill surface.

2.5.3 The sampler shall be set at a flow rate of approximately 333 cubic centimeters per minute

2.5.4 **Walk through a course of approximately 2,600 linear feet over a continuous 25-minute period.** Figure 2 shows a walk pattern for the 50,000 square foot grid.

ALTERNATIVE: THE LANDFILL SAMPLING GRIDS ARE DIVIDED INTO THREE TYPES CONSISTING OF TYPE "A", TYPE "B" AND TYPE "C" AS REFERENCED IN THE MAP SUBMITTED 4/27/00 OR THE MOST RECENT UPDATE, WITH SHEET TITLE "PLAN-INTEGRATED SURFACE EMISSIONS MONITORING GRIDS". THE THREE TYPES OF GRIDS ARE DEFINED AS: TYPE "A" - NO EXCLUSIONS FROM SAMPLING; TYPE "B" - CONTAINING STEEP SLOPES OR STEEP SLOPES AND DENSE VEGETATION ON GRIDS 121, 122, 128, AND 130; AND TYPE "C" - THE AREA OF ACTIVE RECYCLING OPERATIONS. THE TOPOGRAPHIC MAP SHALL BE DRAWN TO SCALE CLEARLY IDENTIFYING TOPOGRAPHICAL FEATURES OF THE LANDFILL WITH CONTOUR LINES. THE LOCATION OF ALL SAMPLING GRIDS AND THE GAS COLLECTION SYSTEM SHALL BE CLEARLY MARKED AND IDENTIFIED. THE SUBMITTED TOPOGRAPHICAL MAP WILL BE FILED IN THE APPLICATION FOLDER AND USED FOR COMPLIANCE. A SMALLER 11" BY 17" TOPOGRAPHICAL MAP IS ATTACHED TO THIS PLAN FOR FIELD REFERENCE. THE TOPOGRAPHICAL MAPS SHALL BE CONFIRMED OR UPDATED ANNUALLY BY THE OWNER/OPERATOR OR AS REQUESTED BY THE EXECUTIVE OFFICER.

SAMPLING OF TYPE "A" SURFACE GRIDS SHALL BE ACCORDING TO THE RULE.

SAMPLING OF TYPE "B" SURFACE GRIDS SHALL CONSIST OF SAMPLING THE TOE OF GRIDS 121, 128, AND 130 AND THE TOP OF GRID 122. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "B" GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT. GRIDS 121 AND 122 EACH DEFINED AS A TYPE "B" GRID, SHALL BE REDESIGNATED AS A TYPE "A" GRID WHEN ENOUGH ADDITIONAL REFUSE HAS BEEN PUT IN PLACE.

SAMPLING OF TYPE "C" SURFACE GRIDS SHALL CONSIST OF SAMPLING A COURSE OF APPROXIMATELY 2,600 LINEAR FEET BUT NOT LESS THAN 1900 LINEAR FEET IN EACH GRID FOR A CONTINUOUS 25-MINUTE PERIOD EXCLUDING STOCKPILES, STORED EQUIPMENT AND RECYCLING EQUIPMENT. RULE 1150.1, ATTACHMENT A, FIGURE 2 SHOWS A 50,000 SQUARE FOOT GRID WALK PATTERN THAT WILL BE MODIFIED TO AVOID THE EXCLUSIONS. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "C" ACTIVE RECYCLING GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT.

2.6 Integrated Surface Sample Analytical Procedures

All samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2. In addition, the samples specified in Section 2.6.1 or 2.6.2 must be analyzed no later than 72 hours after collection for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

2.6.1 Ten percent of all samples which have a concentration of TOC greater than 50 ppmv as methane, or

2.6.2 Two samples if all samples are 50 ppmv or less of TOC or two samples if there are less than 20 samples above 50 ppmv.

The Executive Officer may require more samples to be tested for TAC if he determines there is a potential nuisance or public health problem.

2.7 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

2.8 Recording the Results

2.8.1 Record the volume concentration of both TOC measured as methane for each grid and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of the grids and the gas collection system clearly marked and identified.

2.8.2 Record the wind speed during the sampling period using the wind speed and direction monitoring system required in paragraph (d)(9) of Rule 1150.1.

2.8.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

3.0 INSTANTANEOUS LANDFILL SURFACE MONITORING
Subparagraph (d)(6) and (e)(3) Requirements of Rule 1150.1

3.1 Monitoring Area

The entire landfill disposal area shall be monitored once each calendar quarter. Any area of the landfill that the Executive Officer deems as inaccessible or dangerous for a technician to enter may be excluded from the area to be monitored by the landfill owner or operator. **To exclude an area from monitoring, the landfill owner or operator shall file a petition with the Executive Officer.** Such a request shall include an explanation of why the area should be excluded and photographs of the area. Any excluded area granted shall only apply to the monitoring requirement. The 500 ppmv limit specified in paragraph (d)(6) of Rule 1150.1 applies to all areas.

ALTERNATIVE: MONITORING IS NOT REQUIRED FOR THE FOLLOWING LANDFILL SURFACES: PORTIONS OF SLOPES 30 DEGREES AND GREATER, PAVED SURFACES EXCEPT FOR CRACKS, THE ACTIVE WORKING FACE, THE MAIN HAUL ROAD

AND TEMPORARY STOCKPILES FIVE (5) FEET OR MORE IN HEIGHT. A TEMPORARY STOCKPILE DOES NOT INCLUDE A CLOSED LANDFILL FINAL COVER OR CAP.

3.2 Equipment Description and Specifications

A portable FID shall be used to instantaneously measure the concentration of TOC measured as methane at any location on the landfill. The FID shall meet the specifications listed in Sections 3.2.1 through 3.2.4 and shall be kept in good operating condition.

3.2.1 The portable analyzer shall meet the instrument specifications provided in Section 3 of U.S. EPA Method 21, except that:

3.2.1.1 "Methane" shall replace all references to VOC.

3.2.1.2 A response time of 15 seconds or shorter shall be used instead of 30 seconds.

3.2.1.3 A precision of 3% or better shall be used instead of 10%.

In addition the instrument shall meet the specifications in Sections 3.2.1.4 through 3.2.1.6.

3.2.1.4 A minimum detectable limit of 5 ppmv (or lower).

3.2.1.5 A flame-out indicator, audible and visual.

3.2.1.6 Operate at an ambient temperature of 0 - 50°C.

3.2.2 The calibration gas shall be methane, diluted to a nominal concentration of 10,000 ppmv in air for subsurface refuse boundary probe monitoring and sample analysis to comply with paragraph (e)(1) of Rule 1150.1, 50 ppmv in air for integrated sample analyses to comply with paragraph (e)(2) of Rule 1150.1 and 500 ppmv in air for instantaneous monitoring to comply with paragraph (e)(3) of Rule 1150.1.

3.2.3 To meet the performance evaluation requirements in Section 3.1.3 of U.S. EPA Method 21, the instrument evaluation procedures of Section 4.4 of U.S. EPA Method 21 shall be used.

3.2.4 The calibration procedures provided in Section 4.2 of U.S. EPA Method 21 shall be followed at the beginning of each day before commencing a surface monitoring survey.

3.3 Monitoring Procedures

3.3.1 The owner or operator shall monitor the landfill disposal area for TOC measured as methane using the described portable equipment.

3.3.2 The sampling probe shall be placed at a distance of 0-3 inches above any location of the landfill to take the readings.

3.3.3 At a minimum, an individually identified 50,000 square foot grid shall be used and a walk pattern as illustrated in Figure 2 shall be implemented including areas where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover.

ALTERNATIVE: THE LANDFILL MONITORING GRIDS ARE DIVIDED INTO THREE TYPES CONSISTING OF TYPE "A", TYPE "B" AND TYPE "C" AS REFERENCED IN THE MAP SUBMITTED 4/27/00 OR THE MOST RECENT UPDATE, WITH SHEET TITLE "PLAN-INTEGRATED SURFACE EMISSIONS MONITORING GRIDS". THE THREE TYPES OF GRIDS ARE DEFINED AS: TYPE "A" - NO EXCLUSIONS FROM SAMPLING; TYPE "B" - CONTAINING STEEP SLOPES OR STEEP SLOPES AND DENSE VEGETATION ON GRIDS 121, 122, 128, AND 130; AND TYPE "C" - THE AREA OF ACTIVE RECYCLING OPERATIONS. THE TOPOGRAPHIC MAP SHALL BE DRAWN TO SCALE CLEARLY IDENTIFYING TOPOGRAPHICAL FEATURES OF THE LANDFILL WITH CONTOUR LINES. THE LOCATION OF ALL MONITORING GRIDS AND THE GAS COLLECTION SYSTEM SHALL BE CLEARLY MARKED AND IDENTIFIED. THE SUBMITTED TOPOGRAPHICAL MAP WILL BE FILED IN THE APPLICATION FOLDER AND USED FOR COMPLIANCE. A SMALLER 11" BY 17" TOPOGRAPHICAL MAP IS ATTACHED TO THIS PLAN FOR FIELD REFERENCE. THE TOPOGRAPHICAL MAPS SHALL BE CONFIRMED OR UPDATED ANNUALLY BY THE OWNER/OPERATOR OR AS REQUESTED BY THE EXECUTIVE OFFICER.

MONITORING OF TYPE "A" SURFACE GRIDS SHALL BE ACCORDING TO THE RULE.

MONITORING OF TYPE "B" SURFACE GRIDS SHALL CONSIST OF MONITORING THE TOE OF GRIDS 121, 128, AND 130 AND THE TOP OF GRID 122. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "B" GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT. GRIDS 121 AND 122 EACH DEFINED AS A TYPE "B" GRID, SHALL BE REDESIGNATED AS A TYPE "A" GRID WHEN ENOUGH ADDITIONAL REFUSE HAS BEEN PUT IN PLACE.

MONITORING OF TYPE "C" SURFACE GRIDS SHALL CONSIST OF MONITORING A COURSE OF APPROXIMATELY 2,600 LINEAR FEET BUT NOT LESS THAN 1900 LINEAR FEET IN EACH GRID, EXCLUDING STOCKPILES, STORED EQUIPMENT AND RECYCLING EQUIPMENT. RULE 1150.1, ATTACHMENT A, FIGURE 2 SHOWS A 50,000 SQUARE FOOT GRID WALK PATTERN THAT WILL BE MODIFIED TO AVOID THE EXCLUSIONS. VACUUM READINGS FROM ALL GAS EXTRACTION WELLS LOCATED ON TYPE "C" RECYCLING GRIDS SHALL BE RECORDED MONTHLY AND INCLUDED IN THE QUARTERLY REPORT.

3.4 Recording the Results

3.4.1 Record the location and concentration of TOC measured as methane for any instantaneous reading of 500 ppmv or greater on a topographic map of the landfill, drawn to scale with the location of both the grids and the gas collection system clearly marked and identified.

3.4.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

4.0 LANDFILL GAS SAMPLE FROM GAS COLLECTION SYSTEM Subparagraph (e)(4) Requirement of Rule 1150.1

4.1 Number of Samples

Collect one monthly sample of landfill gas for analysis from the main gas collection header line entering the gas treatment and/or gas control system(s).

4.2 Sampling Procedure

Collect approximately a 10-liter sample in a Tedlar bag or equivalent container over a continuous ten-minute period.

4.3 Analytical Procedures

Samples collected shall be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

4.4 Chain of Custody (Required for samples sent to the lab)

A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

4.5 Recording the Results

4.5.1 Record the volume concentration of both TOC measured as methane and the volume concentration for the required TAC on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of the gas collection and control system clearly marked and identified.

4.5.2 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.

5.0 AMBIENT AIR SAMPLES AT THE LANDFILL PROPERTY BOUNDARY Subparagraph (e)(5) Requirement of Rule 1150.1

5.1 Number of Samples

Monthly ambient air samples shall be collected for analysis at the landfill property boundary from both an upwind and downwind sampler sited to provide good meteorological exposure to the predominant offshore (drainage land breeze) and onshore (sea breeze) wind flow patterns. The upwind and downwind samples shall be collected simultaneously over two 12 hour periods beginning between 9:00 a.m. and 10:00 a.m., and 9:00 p.m. and 10:00 p.m. on the same day or different days.

5.2 Ambient Air Sampling Conditions

Ambient air sampling shall be conducted on days when stable (offshore drainage) and unstable (onshore sea breeze) meteorological conditions are representative for the season. Preferable sampling conditions are characterized by the following meteorological conditions:

5.2.1 Clear cool nights with wind speeds of two miles per hour or less, and

5.2.2 Onshore sea breezes with wind speeds ten miles per hour or less.

No sampling will be conducted if the following adverse meteorological conditions exist:

5.2.3 Rain,

5.2.4 Average wind speeds greater than 15 miles per hour for any 30-minute period, or

5.2.5 Instantaneous wind speeds greater than 25 miles per hour.

Continuously recorded on-site wind speed and direction measurements required in paragraph (d)(9) of Rule 1150.1 will characterize the micrometeorology of the site and serve to verify that the meteorological criteria have been met during sampling.

5.3 Ambient Air Sampler Equipment Description

An ambient air sampling unit consists of a 10-liter Tedlar bag, a DC-operated pump, stainless steel capillary tubing to control the sample rate to the bag, a bypass valve to control the sample flow rate (and minimize back pressure on the pump), a Rotameter for flow indication to aid in setting the flow, a 24-hour clock timer to shut off the sampler at the end of the 24-hour sampling period, and associated tubing and connections (made of stainless steel, Teflon, or borosilicate glass to minimize contamination and reactivity). The physical layout of the sampler is shown in Figure 5.

An alternate ambient air sampler may be used, provided that the landfill owner or operator can show an equivalency with the sampler specifications in Section 5.3 and shown in Figure 5. All alternatives shall be submitted as specified in subdivision (i) of Rule 1150.1.

5.4 Ambient Air Sampler Equipment Specifications

The equipment used when conducting air samples at any landfill property boundary shall meet the following specifications:

5.4.1 Power: one 12V DC marine battery. The marine battery provides 12V DC to the pump and the clock.

5.4.2 Pump: one 12V DC pump. The diaphragm shall be made of non-lubricated Viton rubber. The maximum pump unloaded flow rate shall be 4.5 liters per minute.

5.4.3 Bag: One **10-liter Tedlar bag** with a valve. The Tedlar bag shall be enclosed in a LIGHT-SEALED CONTAINER. The valve is a push-pull type constructed of aluminum and stainless steel, with a Viton or Buna-N (butadiene acrylonitrile co-polymer) o-ring seal.

5.4.4 Rotameter - made of borosilicate glass and has a flow range of 3-to-50 cubic centimeters per minute. The scale is in millimeters (mm) with major graduations (labeled) every 5 mm and minor graduations every 1 mm.

5.4.5 Air flow control orifice: 316 stainless steel capillary tubing.

5.4.6 Bypass valve.

5.4.7 Fittings, tubing, and connectors -- 315 stainless steel or Teflon.

5.4.8 Clock timer with an accuracy of better than 1%.

5.5 Ambient Air Sample Analytical Procedures

Samples collected must be analyzed no later than 72 hours after collection for TOC using U.S. EPA Method 25, 40 CFR, Part 60, Appendix A analysis or a portable FID that meets the requirements in Section 3.2 and for the TAC specified in Table 1 and upon written request, Table II, using U.S. EPA Compendium Method TO-14.

5.6 Chain of Custody (Required for samples sent to the lab)

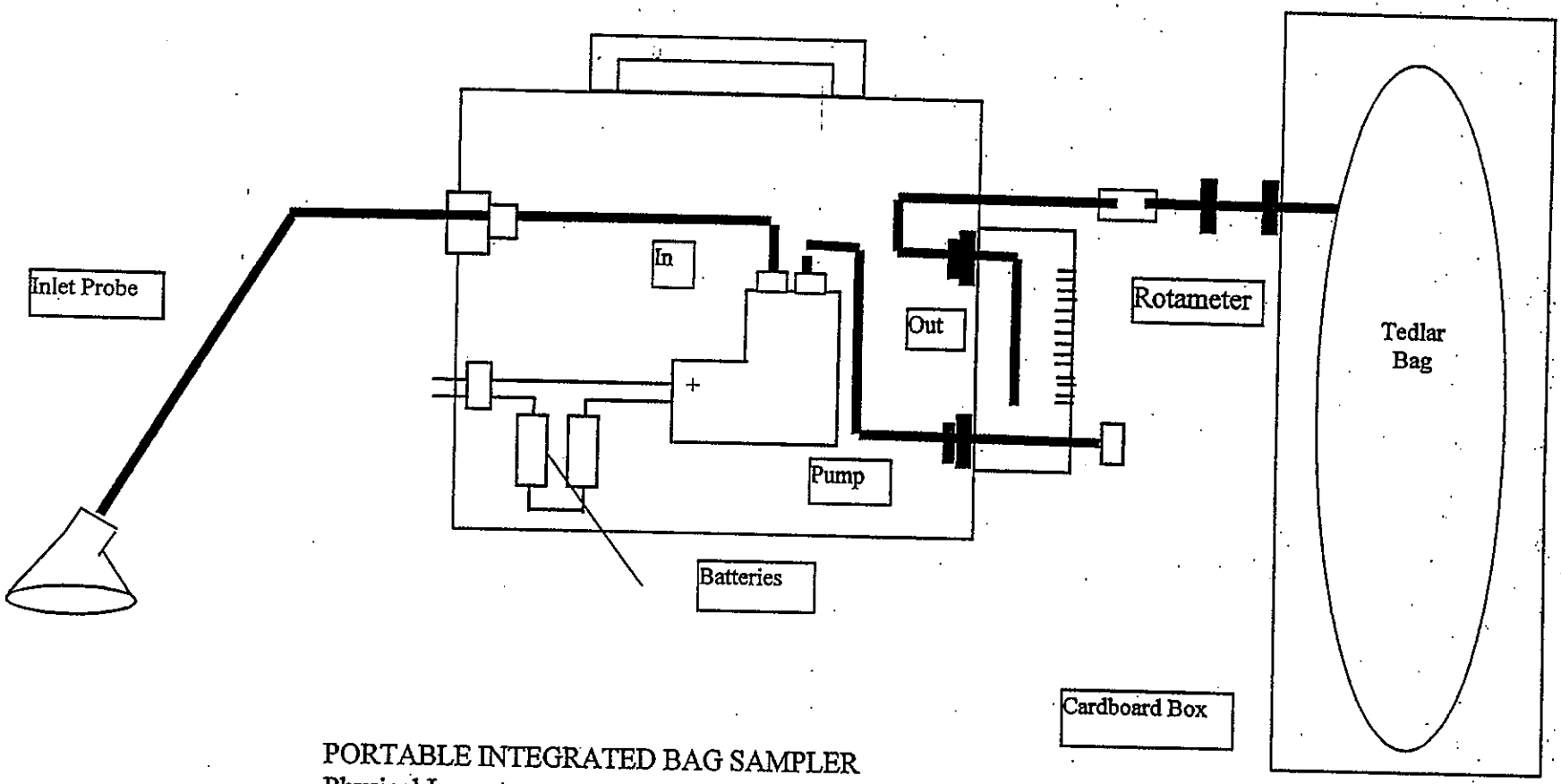
A custody sheet shall accompany the bag samples. Each time a bag changes hands, it shall be logged on the custody sheet with the time of custody transfer recorded. Laboratory personnel shall record the condition of the sample (full, three-fourths full, one-half full, one-fourth full, or empty). An example of a custody sheet is shown in Figure 4.

5.7 Recording the Results

5.7.1 Record the volume concentration of TOC measured as methane and the volume concentration of TAC for each sample on a quality control sheet as shown in Figure 3. Include a topographic map drawn to scale with the location of both the upwind and downwind samplers and the gas collection and control system clearly marked and identified.

5.7.2 Record the wind speed and direction during the 24-hour sampling period using the wind speed and direction monitoring system required in paragraph (d)(9) of Rule 1150.1.

5.7.3 Maintain and submit the results as specified in subdivision (f) of Rule 1150.1.



PORTABLE INTEGRATED BAG SAMPLER
Physical Layout

Figure 1

Typical Landfill Walk Pattern
for a 50,000 Square Foot Grid

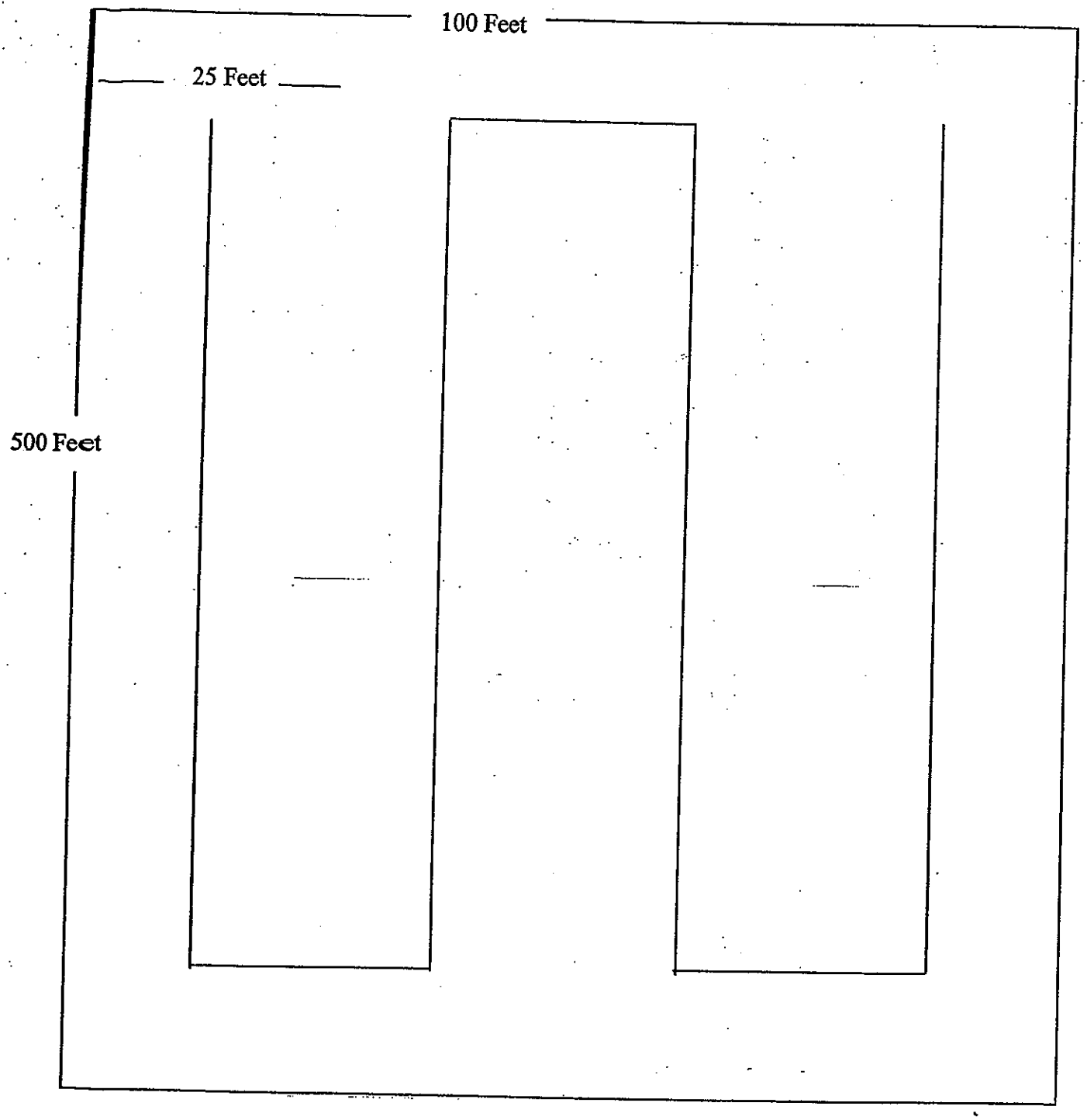


Figure 2

QUALITY CONTROL SHEET

- Prior to use, the Tedlar bag system shall be leak checked, evacuated and filled with purified nitrogen three times to flush out the old sample.
- All samples must be kept in LIGHT-SEALED CONTAINERS to avoid photochemical reactions.

OPERATION					BAG SAMPLES				COMMENTS
Grid or probe #	Date	Wind Speed	Time On	Time Off	I.D.#	Valve Open	Rotameter Reading	Pump (On/Off)	
Signature:									

Figure 3

BAG SAMPLE CUSTODY FORM

Project _____ Date: _____

Bag (I.D. #)									
Condition Received in Lab*									

Bags Prepared By: _____ Time: _____

Date: _____

Bags Taken Out By: _____ Time: _____

Bags Taken to Lab By _____

Bags Received In Lab By: _____ Time _____

* F = 1/2 full to full, 0 = Overfull (Bulging), L = 1/4 to 1/2 full,
E = Less than 1/4 full but contains some sample, N = No sample at all.

Figure 4

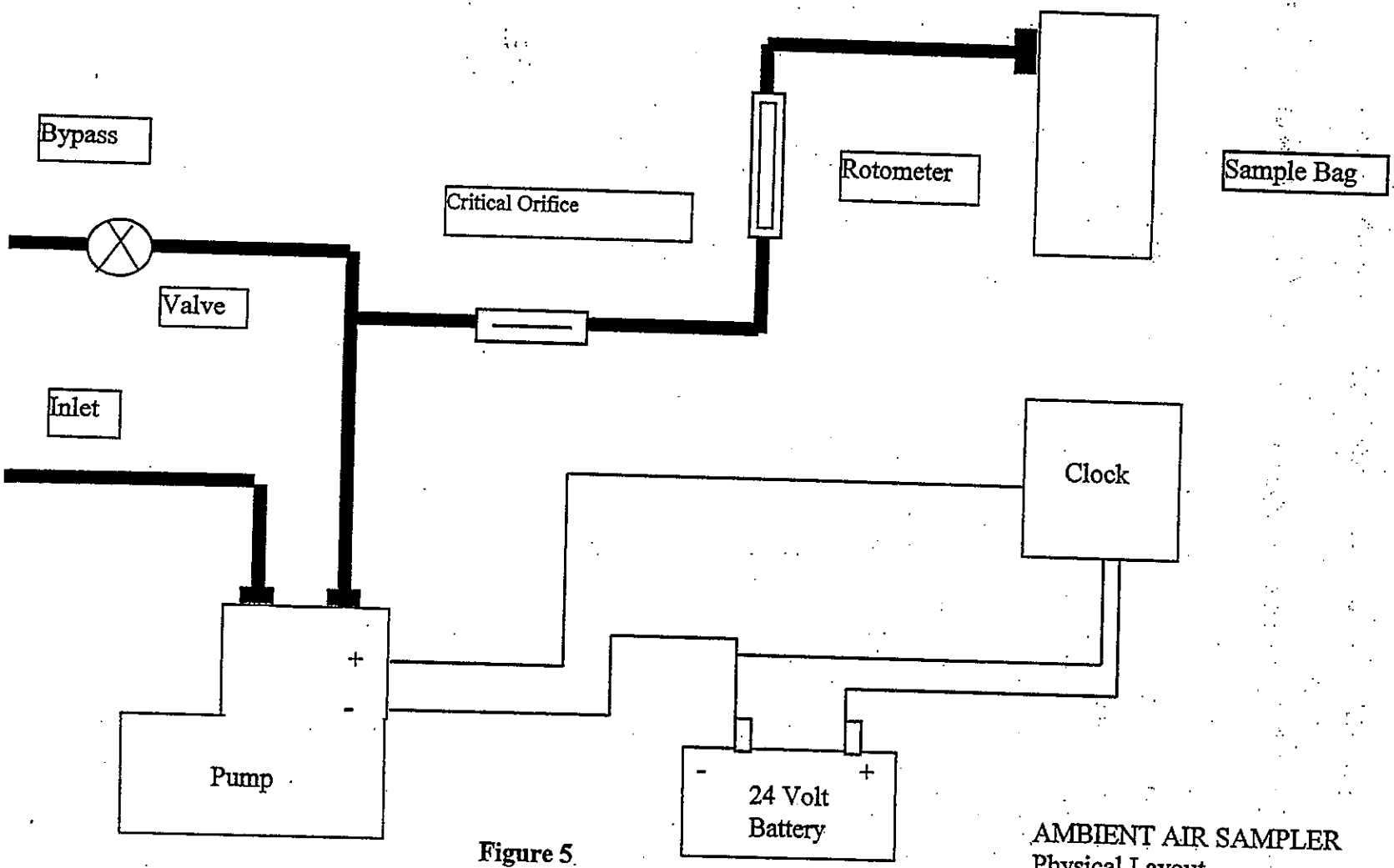


Figure 5

AMBIENT AIR SAMPLER
Physical Layout

TABLE 1 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS
(Core Group)

Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Benzene	C_6H_6
2.	Benzyl Chloride	$C_6H_5H_2C1$
3.	Chlorobenzene	C_6H_5C1
4.	1,2 Dibromoethane (Ethylene Dibromide)	$BrCH_2CH_2Br$
5.	Dichlorobenzene	$C_6H_4C1_2$
6.	1,1 Dichloroethane (Ethylidene Chloride)	CH_3CHC1_2
7.	1,2 Dichloroethane (Ethylene Dichloride)	$C1H_2H_2C1$
8.	1,1 Dichloroethene (Vinylidene Chloride)	$CH_2 : CC1_2$
9.	Dichloromethane (Methylene Chloride)	CH_2C1_2
10.	Hydrogen Sulfide	H_2S
11.	Tetrachloroethylene (Perchloroethylene)	$C1_2C : CC1_2$
12.	Tetrachloromethane (Carbon Tetrachloride)	$CC1_4$
13.	Toluene	$C_6H_5CH_3$
14.	1,1,1 Trichloroethane (Methyl Chloroform)	CH_3CC1_3
15.	Trichloroethylene	$CHC1 : CC1_2$
16.	Trichloromethane (Chloroform)	$CHC1_3$
17.	Vinyl Chloride	$CH_2 : CHC1$
18.	Xylene	$C_6H_4(CH_3)_2$

TABLE 2 - CARCINOGENIC AND TOXIC AIR CONTAMINANTS
(Supplemental Group)
Paragraph (e)(2), Subparagraphs (k)(3)(F) and (k)(3)(G) Requirements of Rule 1150.1

1.	Acetaldehyde	CH3CHO
2.	Acrolein	CH2CHCHO
3.	Acrylonitrile	H2C : CHCN
4.	Allyl Chloride	H2C : CHCH2C1
5.	Bromomethane (Methyl Bromide)	CH3Br
6.	Chlorinated Phenols	
7.	Chloroprene	H2C : CHCC1 : CH2
8.	Cresol	CH3C6H4OH
9.	Dialkyl Nitrosamines	
10.	1,4 - Dioxane	OCH2CH2OCH2CH2
11.	Epichlorohydrin	CH2OCHCH2C1
12.	Ethylene Oxide	CH2CH2O
13.	Formaldehyde	HCHO
14.	Hexachlorocyclopentadiene	C5C16
15.	Nitrobenzene	C6H5NO2
16.	Phenol	C6H5OH
17.	Phosgene	COC12
18.	Polychlorinated Dibenzo-P-Dioxin	
19.	Polychlorinated Dibenzo Furan	
20.	Polychlorinated Biphenols	
21.	Polynuclear Aromatic Hydrocarbons	
22.	Propylene Oxide	CH2-CH-CH3
23.	Tetrahydrothiophene	CH2CH2CH2CH2S
24.	Thiophene	CHCHCHCHS

Attachment B

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites
Subchapter S. Closure and Post-Closure Maintenance
Article 2. Closure and Post-Closure Maintenance Standards for Disposal Sites and Landfills

§21140. Section CIWMB -- Final Cover. (TI4:§17773)

(a) The final cover shall function with minimum maintenance and provide waste containment to protect public health and safety by controlling at a minimum, vectors, fire, odor, litter and landfill gas migration. The final cover shall also be compatible with postclosure land use.
(b) In proposing a final cover design meeting the requirements under §21090, the owner or operator shall assure that the proposal meets the requirements of this section. Alternative final cover designs shall meet the performance requirements of ¶(a) and, for MSWLF units, 40 CFR 258.60(b); shall be approved by the enforcement agency for aspects of ¶(a).
(c)The EA may require additional thickness, quality, and type of final cover depending on, but not limited to the following:
(1) a need to control landfill gas emissions and fires;
(2) the future reuse of the site; and
(3) provide access to all areas of the site as needed for inspection of monitoring and control facilities, etc.

NOTE

Authority cited: Sections 40502 and 43020, Public Resources Code; and Section 66796.22 (d), Government Code. Reference: Sections 43021 and 43103, Public Resources Code; and Section 66796.22(d), Government Code.

HISTORY

1. New section filed 6-18-97; operative 7-18-97 (Register 97, No. 25).

Attachment C

TITLE 27. Environmental Protection

Division 2. Solid Waste

Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Solid

Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites

Subchapter 2. Siting and Design

Article 2. SWRCB -- Waste Classification and Management

§20200. SWRCB -- Applicability and Classification Criteria. (CI5: §2520)

(a) Concept--This article contains a waste classification system which applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to waste management units (Units) for treatment, storage, or disposal in accordance with the requirements of this division. Wastes which can be discharged directly or indirectly *(e.g., by percolation)* to waters of the state under effluent or concentration limits that implement applicable water quality control plans *(e.g., municipal or industrial effluent or process wastewater)* are not subject to the SWRCB-promulgated provisions of this division. This waste classification system shall provide the basis for determining which wastes may be discharged at each class of Unit. Waste classifications are based on an assessment of the potential risk of water quality degradation associated with each category of waste.

(1) The waste classifications in this article shall determine where the waste can be discharged unless the waste does not consist of or contain municipal solid waste (MSW) and the discharger establishes to the satisfaction of the RWQCB that a particular waste constituent or combination of constituents presents a lower risk of water quality degradation than indicated by classification according to this article.

(2) Discharges of wastes identified in §20210 or §20220 of this article shall be permitted only at Units which have been approved and classified by the RWQCB in accordance with the criteria established in Article 3 of this subchapter, and for which WDRs have been prescribed or waived pursuant to Article 4, Subchapter 3, Chapter 4 of this subdivision (§21710 et seq.). Table 2.1 (of this article) presents a summary of discharge options for each waste category.

(b) Dedicated Units/Cells For Certain Wastes--The following wastes shall be discharged only at dedicated Units [or dedicated landfill cells *(e.g., ash monofill cell)*] which are designed and constructed to contain such wastes:

(1) wastes which cause corrosion or decay, or otherwise reduce or impair the integrity of containment structures;

(2) wastes which, if mixed or commingled with other wastes can produce a violent reaction (including heat, pressure, fire or explosion), can produce toxic byproducts, or can produce any reaction product(s) which:

(A) requires a higher level of containment;

(B) is a restricted waste; or

(C) impairs the integrity of containment structures.

(c) Waste Characterization--Dischargers shall be responsible for accurate characterization of

wastes, including determinations of whether or not wastes will be compatible with containment features and other wastes at a Unit under ¶(b), and whether or not wastes are required to be managed as hazardous wastes under Chapter 11 of Division 4.5 of Title 22 of this code.
(d) Management of Liquids at Landfills and Waste Piles--The following requirements apply to discharges of liquids at Class II waste piles and at Class II and Class III landfills, except as otherwise required for MSW landfills by more-stringent state and federal requirements under SWRCB Resolution No. 93-62 section 2908 of Title 23 of this Code (see 40CFR258.28) *[Note: see also definitions of "leachate" and "landfill gas condensate"* in §20164*]:*
(1) [Reserved.];

(2) wastes containing free liquids shall not be discharged to a Class II waste pile. Any waste that contains liquid in excess of the moisture-holding capacity of the waste in the Class II landfill, or which contains liquid in excess of the moisture-holding capacity as a result of waste management operations, compaction, or settlement shall only be discharged to a surface impoundment or to another Unit with containment features equivalent to a surface impoundment; and
(3) liquids or semi-solid waste (i.e., waste containing less than 50 percent solids, by weight), other than dewatered sewage or water treatment sludge as described in §20220(c), shall not be discharged to Class III landfills. Exceptions may be granted by the RWQCB if the discharger can demonstrate that such discharge will not exceed the moisture-holding capacity of the landfill, either initially or as a result of waste management operations, compaction, or settlement, so long as such discharge is not otherwise prohibited by applicable state or federal requirements.

APPENDIX B

SUBSURFACE PERIMETER PROBE MONITORING

- Field Sheets
- Laboratory Analysis
- Sample Chain-of-Custody
- Instrumentation Calibration

MONTHLY READINGS

BRADLEY LANDFILL GAS PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07252)
Calibrated to 15.0% CH_4.

BAROMETRIC (before): 28.91

TECHNICIAN: RAUL BONGATO

BAROMETRIC (after): 28.93

DATE: 7/25/05

START TIME: 10:05

FINISH TIME 15:25

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
W-1S	-0.1	0.0	
W-1M	-0.1	0.0	
W-1D	-0.2	0.0	
W-2A	-0.1	0.0	
W2B	-0.1	0.0	
W-3S	-0.1	0.0	
W-3M	-0.3	0.0	
W-3D	-0.4	0.0	
W-4	-0.1	0.0	
W-5S	+0.0	0.0	
W-5M	-0.2	0.0	
W-5D	-0.4	0.0	
W-6	+0.0	0.0	
W-7S	+0.0	0.0	
W-7M	-0.4	0.0	
W-7D	-0.2	0.0	
W-8	+0.0	0.0	
W-9A	+0.1	0.0	
W-9B	+0.0	0.0	
W-10S	+0.0	0.0	
W-10M	+0.0	0.0	
W10D	-0.1	0.0	
W-11	+0.1	0.0	
W-12S	+0.1	0.0	
W12M	+0.0	0.0	
W-12D	+0.0	0.0	
W-13	+0.0	0.0	
W-14S	+0.0	0.0	
W-14M	+0.0	0.0	
W-14D	-0.5	0.0	

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
S-3S	+0.1	0.0	
S-3M1	+0.1	0.0	
S-3M2	+0.1	0.0	
S-3D	+0.2	0.0	
S-4	+0.1	0.0	
S-5	+0.5	0.0	
S-6S	+0.1	0.0	
S-6M1	+0.1	0.0	
S-6M2	+0.2	0.0	
S-6D	+0.1	0.0	
S-7	+0.1	0.0	
S-8	+0.1	0.0	
S-9S-R	+0.0	0.0	
S-9M1-R	+0.1	0.0	
S-9M2-R	+0.1	0.0	
S-9D-R	+0.1	0.0	
S-10R	+0.0	0.0	
S-11R	+0.1	0.0	
S-12	+0.1	0.0	

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
E-1			
E-2S			
E-2M			
E-2D			
E-3			
E-4			
E-5S			
E-5M			
E-5D			
E-6			
E-7			
E-8S			
E-8M			
E-8D			
E-9+			
E-10			
E-11S-R			
E-11M-R			
E-11D-R			
E-12			
E-13			
E-14S			
E-14M			
E-14D			

ction Levels:
(1) All probes monitored show methane less than 3%. Fax to Ann Jones.
(2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see Instructions on reverse)
(3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
(4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

lonitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

ll probes at Action Level (1), No action items required: (Yes) / No Technician: Raul Bongato Date: 7/27/05
(If "No", please see attached Action Taken and Notification sheet)

MONTHLY READINGS

BRADLEY LANDFILL GAS PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07252)
Calibrated to 15.0% CH_4.

BAROMETRIC (before): 28.90

TECHNICIAN: RAUL BONGATO

BAROMETRIC (after): 28.90

DATE: 7/27/05

START TIME: 12:35

FINISH TIME 15:31

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
W-1S			
W-1M			
W-1D			
W-2A			
W2B			
W-3S			
W-3M			
W-3D			
W-4			
W-5S			
W-5M			
W-5D			
W-6			
W-7S			
W-7M			
W-7D			
W-8			
W-9A			
W-9B			
N-10S			
N-10M			
N10D			
N-11			
N-12S			
N12M			
N-12D			
N-13			
N-14S			
N-14M			
N-14D			

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
S-3S			
S-3M1			
S-3M2			
S-3D			
S-4			
S-5			
S-6S			
S-6M1			
S-6M2			
S-6D			
S-7			
S-8			
S-9S-R			
S-9M1-R			
S-9M2-R			
S-9D-R			
S-10R			
S-11R			
S-12			

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
E-1	-0.2	0.0	
E-2S		0.0	
E-2M		0.0	
E-2D		0.0	
E-3	-0.2	0.0	
E-4	-0.2	0.0	
E-5S	00.1	0.0	
E-5M	-0.1	0.0	
E-5D	+0.0	0.0	
E-6	-0.1	0.0	
E-7	-0.1	0.0	
E-8S	-7.2	0.0	
E-8M	-0.3	0.0	
E-8D	-0.3	43.6	N/A
E-9+	-0.1	0.0	
E-10	-0.1	0.0	
E-11S-R		0.0	
E-11M-R		0.0	
E-11D-R		0.0	
E-12	0.1	0.0	
E-13	-0.1	0.0	
E-14S		0.0	
E-14M		0.0	
E-14D		0.0	

ction Levels: (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
(2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
(3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
(4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

lonitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

If probes at Action Level (1), No action items required: (Yes) / No Technician: Raul Bongato Date: 7/27/05
(If "No", please see attached Action Taken and Notification sheet)

Monthly Probe

BRADLEY LANDFILL GAS PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07252) Calibrated to 15.0% CH_4.

BAROMETRIC (before): 28.79

TECHNICIAN: RAUL BONILLA

BAROMETRIC (after): 28.81

DATE: 8/29/05

START TIME: 7:58

FINISH TIME: 15:22

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
W-1S	-0.1	0.0	1
W-1M	-0.2	0.0	1
W-1D	-0.3	0.0	1
W-2A	-0.2	0.0	1
W2B	-0.1	0.0	1
W-3S	-0.2	0.0	1
W-3M	-0.3	0.0	1
W-3D	-0.6	0.0	1
W-4	-0.2	0.0	1
W-5S	+0.0	0.0	1
W-5M	+0.5	0.0	1
W-5D	+0.0	0.0	1
W-6	-0.1	0.0	1
W-7S	+0.0	0.0	1
W-7M	-0.9	0.0	1
W-7D	-0.7	0.0	1
W-8	+0.0	0.0	1
W-9A	+0.0	0.0	1
W-9B	-0.1	0.0	1
W-10S	+0.0	0.0	1
W-10M	-0.5	0.0	1
W10D	-0.3	0.0	1
W-11	+0.1	0.0	1
W-12S	+0.1	0.0	1
W12M	-0.3	0.0	1
W-12D	+0.6	0.0	1
W-13	+0.0	0.0	1
W-14S	+0.1	28.1	NA
W-14M	+0.1	0.8	1
W-14D	+0.0	0.0	1

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
W14SR	+0.0	0.0	1
W14MR	+0.1	0.0	1
S-3S	+0.1	0.0	1
S-3M1	+0.1	0.0	1
S-3M2	+0.1	0.0	1
S-3D	+0.1	0.0	1
S-4	+0.1	0.0	1
S-5	+0.1	0.0	1
S-6S	+0.1	0.0	1
S-6M1	+0.2	0.0	1
S-6M2	+0.3	0.0	1
S-6D	+0.2	0.0	1
S-7	+0.1	0.0	1
S-8	+0.1	0.0	1
S-8S-R	+0.1	0.0	1
S-9M1-R	+0.2	0.0	1
S-9M2-R	+0.3	0.0	1
S-9D-R	+0.2	0.0	1
S-10R	+0.2	0.0	1
S-11R	+0.1	0.0	1
S-12	+0.1	0.0	1

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
E-1	+0.3	0.0	1
E-2S	+0.2	0.0	1
E-2M	+0.0	0.0	1
E-2D	+0.5	0.0	1
E-3	+0.0	0.0	1
E-4	+0.2	0.0	1
E-5S	+0.2	0.0	1
E-5M	+0.2	0.0	1
E-5D	+0.3	0.0	1
E-6	+0.2	0.0	1
E-7	+0.2	0.0	1
E-8S	-0.6	0.0	1
E-8M	-0.4	0.0	1
E-8D	+0.3	50.0	NA
E-9+	+0.0	0.0	1
E-10	+0.1	0.0	1
E-11S-R	+0.1	0.0	1
E-11M-R	+0.1	0.0	1
E-11D-R	-0.1	0.0	1
E-12	+0.1	0.0	1
E-13	+0.1	0.0	1
E-14S	+0.1	0.0	1
E-14M	+0.1	0.0	1
E-14D	+0.1	0.0	1

Action Levels: (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
(2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
(3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
(4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: (Yes) / No (If "No", please see attached Action Taken and Notification sheet)

Technician: Raul Bonilla Date: 8/29/05

Monthly

BRADLEY LANDFILL GAS PROBE READINGS

EQUIPMENT USED: Landtec GEM 2000 (Serial No. 07406)
Calibrated to 15.0% CH_4.

BAROMETRIC (before): 29.01

TECHNICIAN: RAUL BONGATO

BAROMETRIC (after): 28.97

DATE: 9/19/05

START TIME: 08:37

FINISH TIME: 16:12

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
W-1S	+0.0	0.0	1
W-1M	-0.1	0.0	1
W-1D	-0.2	0.0	1
W-2A	+0.0	0.0	1
W2B	+0.0	0.0	1
W-3S	-0.1	0.0	1
W-3M	-0.2	0.0	1
W-3D	-0.5	0.0	1
W-4	+0.0	0.0	1
W-5S	+0.0	0.0	1
W-5M	-0.2	0.0	1
W-5D	-0.7	0.0	1
W-6	-0.1	0.0	1
W-7S	+0.0	0.0	1
W-7M	-0.8	0.0	1
W-7D	-0.7	0.0	1
W-8	+0.0	0.0	1
W-9A	+0.0	0.0	1
W-9B	-0.1	0.0	1
W-10S	+0.0	0.0	1
W-10M	-0.6	0.0	1
W10D	-0.3	0.0	1
W-11	+0.0	0.0	1
W-12S	+0.0	0.0	1
W12M	-0.4	0.0	1
W-12D	+0.0	0.0	1
W-13	+0.0	0.0	1
W-14S	+0.0	0.0	1
W-14M	-0.1	0.0	1
W-14D	-0.6	0.0	1

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
S-3S	+0.0	0.0	1
S-3M1	+0.0	0.0	1
S-3M2	+0.0	0.0	1
S-3D	+0.0	0.0	1
S-4	+0.0	0.0	1
S-5	+0.0	0.0	1
S-6S	+0.0	0.0	1
S-6M1	+0.0	0.0	1
S-6M2	+0.0	0.0	1
S-6D	+0.0	0.0	1
S-7	+0.0	0.0	1
S-8	+0.0	0.0	1
S-9S-R	+0.0	0.0	1
S-9M1-R	+0.0	0.0	1
S-9M2-R	-0.1	0.0	1
S-9D-R	-0.2	0.0	1
S-10R	+0.0	0.0	1
S-11R	+0.0	0.0	1
S-12	+0.0	0.0	1

Probe No.	Static Pres. (in w.c.)	TOC (% CH_4)	Action Level
E-1	-0.1	0.0	1
E-2S	-0.2	0.0	1
E-2M	-0.3	0.0	1
E-2D	-0.6	0.0	1
E-3	-0.3	0.0	1
E-4	-0.1	0.0	1
E-5S	-0.1	0.0	1
E-5M	-0.1	0.0	1
E-5D	-0.1	0.0	1
E-6	-0.1	0.0	1
E-7	-0.1	0.0	1
E-8S	-0.2	0.0	1
E-8M	-0.5	0.0	1
E-8D	-0.9	56.5	N/A
E-9	-0.2	0.0	1
E-10	-0.1	0.0	1
E-11S-R	+0.1	0.0	1
E-11M-R	-0.2	0.0	1
E-11D-R	-0.8	0.0	1
E-12	-0.1	0.0	1
E-13	-0.3	0.0	1
E-14S	-0.2	0.0	1
E-14M	-0.2	0.0	1
E-14D	-0.3	0.0	1

Action Levels: (1) All probes monitored show methane less than 3%. Fax to Ann Jones.
(2) Any probe showing methane concentrations equal or greater than 3% and less than 5%. (see instructions on reverse)
(3) Any probe containing methane concentrations of 5% or greater. (see instructions on reverse)
(4) Any probe exceeding 5% for 3 or more days (see instructions on reverse)

Monitoring Protocol: Probe monitoring is conducted in accordance with SCAQMD Rule 1150.1, Attachment A, Section 1.3.1. Prior to sampling each probe is evacuated until the Total Organic Compound concentrations remains constant for 30 seconds.

All probes at Action Level (1), No action items required: (Yes) / No Technician: Raul Bongato Date: 9/19/05

(If "No", please see attached Action Taken and Notification sheet)

AtmAA Inc.
23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

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LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Samples

Report Date: August 3, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: July 27, 2005
Date Analyzed: July 27-29, 2005

AtmAA Lab No.:	02085-3	02085-4
Sample I.D.:	Probe E8D BL-010	Probe W-14S BL-011
Components	*(Concentration in %,v)*	
Nitrogen	10.9	76.8
Oxygen	0.45	21.8
Methane	52.8	<0.1
Carbon dioxide	34.5	<0.1
	(Concentration in ppmv)	
Methane	528000	208
TGNMO	732	23.5
Hydrogen sulfide	<500	<50
	(Concentration in ppbv)	
Benzene	<20	1.90
Benzylchloride	<40	<0.8
Chlorobenzene	<30	<0.3
Dichlorobenzenes*	<30	<1.1
1,1-dichloroethane	242	7.37
1,2-dichloroethane	<20	<0.3
1,1-dichloroethylene	<30	<0.3
Dichloromethane	<30	0.44
1,2-dibromoethane	<30	<0.3
Perchloroethylene	<30	0.36
Carbon tetrachloride	<30	<0.3
Toluene	<20	6.33
1,1,1-trichloroethane	<20	<0.3
Trichloroethene	<20	0.34
Chloroform	<20	<0.3
Vinyl chloride	1820	12.2
m+p-xylenes	<30	7.35
o-xylene	<20	3.74

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.
The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.
TGNMO is total gaseous non-methane organics are reported as ppm methane.
** total amount containing meta, para, and ortho isomers*

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: July 27, 2005
Date Analyzed: July 27-29, 2005

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in %,v)			
Nitrogen	Probe E8D	11.0	10.8	10.9	0.92
	Probe W-14S	76.8	76.8	76.8	0.0
Oxygen	Probe E8D	0.44	0.46	0.45	2.2
	Probe W-14S	21.6	21.9	21.8	0.69
Methane	Probe E8D	52.8	52.9	52.8	0.10
	Probe W-14S	<0.1	<0.1	---	---
Carbon dioxide	Probe E8D	34.2	34.8	34.5	0.87
	Probe W-14S	<0.1	<0.1	---	---
		(Concentration in ppmv)			
Methane	No Repeat				
TGNMO	Probe E8D	692	771	732	5.4
Hydrogen sulfide	Probe E8D	<500	<500	---	---
	Probe W-14S	<50	<50	---	---
		(Concentration in ppbv)			
Benzene	Probe E8D	<20	<20	---	---
	Probe W-14S	1.95	1.86	1.90	2.4
Benzylchloride	Probe E8D	<40	<40	---	---
	Probe W-14S	<0.8	<0.8	---	---
Chlorobenzene	Probe E8D	<30	<30	---	---
	Probe W-14S	<0.3	<0.3	---	---
Dichlorobenzenes	Probe E8D	<30	<30	---	---
	Probe W-14S	<1.1	<1.1	---	---
1,1-dichloroethane	Probe E8D	242	241	242	0.21
	Probe W-14S	7.48	7.26	7.37	1.5
1,2-dichloroethane	Probe E8D	<20	<20	---	---
	Probe W-14S	<0.3	<0.3	---	---

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in ppbv)			
1,1-dichloroethylene	Probe E8D	<30	<30	---	---
	Probe W-14S	<0.3	<0.3	---	---
Dichloromethane	Probe E8D	<30	<30	---	---
	Probe W-14S	0.46	0.43	0.44	3.4
1,2-dibromoethane	Probe E8D	<30	<30	---	---
	Probe W-14S	<0.3	<0.3	---	---
Perchloroethylene	Probe E8D	<30	<30	---	---
	Probe W-14S	0.37	0.36	0.36	1.4
Carbon tetrachloride	Probe E8D	<30	<30	---	---
	Probe W-14S	<0.3	<0.3	---	---
Toluene	Probe E8D	<20	<20	---	---
	Probe W-14S	6.45	6.21	6.33	1.9
1,1,1-trichloroethane	Probe E8D	<20	<20	---	---
	Probe W-14S	<0.3	<0.3	---	---
Trichloroethene	Probe E8D	<20	<20	---	---
	Probe W-14S	0.35	0.32	0.34	4.5
Chloroform	Probe E8D	<20	<20	---	---
	Probe W-14S	<0.3	<0.3	---	---
Vinyl chloride	Probe E8D	1810	1820	1820	0.28
	Probe W-14S	12.5	12.0	12.2	2.0
m+p-xylenes	Probe E8D	<30	<30	---	---
	Probe W-14S	7.53	7.17	7.35	2.4
o-xylene	Probe E8D	<20	<20	---	---
	Probe W-14S	3.83	3.66	3.74	2.3

Two Tedlar bag samples, laboratory numbers 02085-(3 & 4), were analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 18 repeat measurements from the two Tedlar bag samples is 1.8%.

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Page 1 of 1

Shaw Environmental and Infrastructure Inc.

Company Name: *Shaw Environmental & Infra., Inc.*
Address: *9081 Tujunga Avenue*
City / State / Zip: *Sun Valley, CA 91352*
Manager: *Darrell Thompson*
Phone/Fax Number: *818-767-0444*
Send Report To: *Tom Sandhu*
Address: *9081Tujunga Avenue*
City: *Sun Valley, CA 91352*
Project Contact: *Tom Sandhu*
Phone/Fax Number: *(818) 822-5273*

Project Number: *108341.01*
Project Name: *Bradley Landfill*
Project Location: *Sun Valley, California*
Purchase Order #:
Lab Destination: *AtmAA, Inc.*
Lab Contact: *Micheal*
Lab Phone #: *(818) 223-3277*

Program: [ ] Navy [ ] AFCEE [ ] DOT [X] USACE [ ] NPDES [ ] RCRA [ ] Other

		Collection Information						PRESERVATION						Requesting Testing Program									
Shaw Sample Number	Sample Identification	Date	Time	Method	Matrix	# of Containers	QC Level	HCL	NaOH	HNO_3	H_2SO_4	Ice		Total BTU's	TOC Method 25	TAO Rule 1150.1	TRS / 307.91	Table 1 Core Group	Fixed Gases (CO_2, O_2, N_2)				MS/MSD = M, Field Duplicate = D
020853-4 BL-010	Probe E8D	07/25/05		LF	A	1									x	x		x	x				
BL-011	Probe W-14S	07/25/05		LF	A	1									x	x		x	x				

Special Instructions:

Sampler(s) Name(s): Paul Boccato

Relinquished By: Thomas Handler	Date: 7/27/05	Time: 9:35	Received By: Thomas Duran
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:
Turnaround Time: Normal			Rush

Date: 7-28-05 Time: 9:35 (Received By)
Date: 7-27-05 Time: 1011 (Received By)

Method Codes
C = Composite
G = Grab
LF - Low Flow

Matrix Codes
DW = Drinking Water
GW = Ground Water
WW = Waste Water
SW = Surface Water
LIQ = Other Liquid
SOL = Other Solid
SO = Soil
SL = Sludge
CP = Chip Samples
WP = Wipe Samples
A = Air Sample

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LABORATORY ANALYSIS REPORT

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SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: September 7, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: August 30, 2005
Date Analyzed: August 31, 2005

AtmAA Lab No.:	02425-10
Sample I.D.:	Probe E-8D BL-001
Components	*(Concentration in %,v)*
Nitrogen	17.0
Oxygen	0.81
Methane	46.7
Carbon dioxide	34.4
	(Concentration in ppmv)
TGNMO	1300
Hydrogen sulfide	<0.5
	(Concentration in ppbv)
Benzene	21.2
Benzylchloride	<40
Chlorobenzene	<30
Dichlorobenzenes*	<30
1,1-dichloroethane	234
1,2-dichloroethane	<20
1,1-dichloroethylene	<30
Dichloromethane	<30
1,2-dibromoethane	<30
Perchloroethylene	<30
Carbon tetrachloride	<30
Toluene	<20
1,1,1-trichloroethane	<20
Trichloroethene	<20
Chloroform	<20
Vinyl chloride	2250
m+p-xylenes	<30
o-xylene	<20

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.
The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.
TGNMO is total gaseous non-methane organics (excluding ethane), reported as ppm methane.
** total amount containing meta, para, and ortho isomers*

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: August 30, 2005
Date Analyzed: August 31, 2005

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in %,v)			
Nitrogen	Probe E-8D	16.9	17.0	17.0	0.29
Oxygen	Probe E-8D	0.81	0.81	0.81	0.0
Methane	Probe E-8D	47.2	46.2	46.7	1.1
Carbon dioxide	Probe E-8D	34.8	34.1	34.4	1.0
		(Concentration in ppmv)			
TGNMO	No Repeat				
Hydrogen sulfide	Probe E-8D	<0.5	<0.5	---	---
		(Concentration in ppbv)			
Benzene	Probe E-8D	21.8	20.6	21.2	2.8
Benzylchloride	Probe E-8D	<40	<40	---	---
Chlorobenzene	Probe E-8D	<30	<30	---	---
Dichlorobenzenes	Probe E-8D	<30	<30	---	---
1,1-dichloroethane	Probe E-8D	234	234	234	0.0
1,2-dichloroethane	Probe E-8D	<20	<20	---	---
1,1-dichloroethylene	Probe E-8D	<30	<30	---	---
Dichloromethane	Probe E-8D	<30	<30	---	---
1,2-dibromoethane	Probe E-8D	<30	<30	---	---
Perchloroethylene	Probe E-8D	<30	<30	---	---
Carbon tetrachloride	Probe E-8D	<30	<30	---	---

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in ppbv)			
Toluene	Probe E-8D	<20	<20	---	---
1,1,1-trichloroethane	Probe E-8D	<20	<20	---	---
Trichloroethene	Probe E-8D	<20	<20	---	---
Chloroform	Probe E-8D	<20	<20	---	---
Vinyl chloride	Probe E-8D	2260	2240	2250	0.44
m+p-xylenes	Probe E-8D	<30	<30	---	---
o-xylene	Probe E-8D	<20	<20	---	---

One Tedlar bag sample, laboratory number 02425-10, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 7 repeat measurements from the one Tedlar bag sample is 0.80%.

Shaw

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Shaw Environmental and Infrastructure Inc.

Company Name: Shaw Environmental & Infra., Inc.
Address: 9081 Tujunga Avenue
City / State / Zip: Sun Valley, CA 91352
Manager: Darrell Thompson
Phone/Fax Number: (626) 535-9076
Send Report To: Tom Sandhu
Address: 9081 Tujunga Avenue
City: Sun Valley, CA 91352
Project Contact: Tom Sandhu
Phone/Fax Number: (818) 822-5273

Project Number: 108341.01
Project Name: Bradley Landfill
Project Location: Sun Valley, California
Purchase Order #:
Lab Destination: AtmAA, Inc.
Lab Contact: Micheal
Lab Phone #: (818) 223-3277

Program: [ ] Navy [ ] AFCEE [ ] DOT [X] USACE [ ] NPDES [ ] RCRA [ ] Other

Shaw Sample Number	Sample Identification	Collection Information: Date	Time	Method	Matrix	# of Containers	QC Level	PRESERVATION: HCL	NaOH	HNO_3	H_2SO_4	Ice	Requesting Testing Program: Total BTU's	TOC Method 25	TAC Rule 1160.1	TRS / 307.91	Table 1 Core Group	CO_2, O_2, N_2	ethanes	Carbon Speciation	Helium	MS/MSD = M, Field Duplicate = D
BL-001	Probe E-8D	08/29/05	3:15	LF	A	1								x	x		x	x				
BL-002	Flare No. 1	08/30/05	8:30	LF	A	1							x	x	x	x	x	x				
BL-003	Flare No. 2	08/30/05	9:00	LF	A	1							x	x	x	x	x	x				
BL-004	Flare No. 3	08/30/05	9:30	LF	A	1							x	x	x	x	x	x				
BL-005	Gas Compressor	08/30/05	1:30	LF	A	1							x	x	x	x	x	x				

Special Instructions:

Sampler(s) Name(s): Raul Bongato

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Thomas Sandhu	8/30/05	4:07 PM	Ray ACS	8-30-05	4:07
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Turnaround Time: Normal			Rush		

Method Codes

C = Composite G = Grab
LF - Low Flow

Matrix Codes

DW = Drinking Water SO = Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples
SW = Surface Water WP = Wipe Samples
LIQ = Other Liquid A = Air Sample
SOL = Other Solid

AtmAA Inc.
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environmental consultants
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LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Probe Tedlar Bag Sample

Report Date: September 26, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: September 20, 2005
Date Analyzed: September 20 & 22, 2005

AtmAA Lab No.:	02635-29
Sample I.D.:	Probe E-8D BL-001
Components	*(Concentration in %,v)*
Nitrogen	16.2
Oxygen	0.90
Methane	46.8
Carbon dioxide	34.6
	(Concentration in ppmv)
TGNMO	5560
Hydrogen sulfide	<0.5
	(Concentration in ppbv)
Benzene	22.9
Benzylchloride	<40
Chlorobenzene	<30
Dichlorobenzenes*	<30
1,1-dichloroethane	250
1,2-dichloroethane	39.0
1,1-dichloroethylene	<30
Dichloromethane	<30
1,2-dibromoethane	<30
Perchloroethylene	<30
Carbon tetrachloride	<30
Toluene	<20
1,1,1-trichloroethane	<20
Trichloroethene	<20
Chloroform	<20
Vinyl chloride	1990
m+p-xylenes	<30
o-xylene	<20

The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported.
The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.
TGNMO is total gaseous non-methane organics (excluding ethane), reported as ppm methane.
** total amount containing meta, para, and ortho isomers*

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: September 20, 2005
Date Analyzed: September 20 & 22, 2005

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in %,v)			
Nitrogen	Probe E-8D	16.3	16.0	16.2	0.93
Oxygen	Probe E-8D	0.88	0.91	0.90	1.7
Methane	Probe E-8D	46.9	46.6	46.8	0.32
Carbon dioxide	Probe E-8D	34.5	34.6	34.6	0.14
		(Concentration in ppmv)			
TGNMO	Probe E-8D	5650	5480	5560	1.5
Hydrogen sulfide	Probe E-8D	<0.5	<0.5	---	---
		(Concentration in ppbv)			
Benzene	Probe E-8D	23.0	22.8	22.9	0.44
Benzylchloride	Probe E-8D	<40	<40	---	---
Chlorobenzene	Probe E-8D	<30	<30	---	---
Dichlorobenzenes	Probe E-8D	<30	<30	---	---
1,1-dichloroethane	Probe E-8D	256	245	250	2.2
1,2-dichloroethane	Probe E-8D	39.3	38.6	39.0	0.90
1,1-dichloroethylene	Probe E-8D	<30	<30	---	---
Dichloromethane	Probe E-8D	<30	<30	---	---
1,2-dibromoethane	Probe E-8D	<30	<30	---	---
Perchloroethylene	Probe E-8D	<30	<30	---	---
Carbon tetrachloride	Probe E-8D	<30	<30	---	---

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in ppbv)			
Toluene	Probe E-8D	<20	<20	---	---
1,1,1-trichloroethane	Probe E-8D	<20	<20	---	---
Trichloroethene	Probe E-8D	<20	<20	---	---
Chloroform	Probe E-8D	<20	<20	---	---
Vinyl chloride	Probe E-8D	1990	1990	1990	0.0
m+p-xylenes	Probe E-8D	<30	<30	—	---
o-xylene	Probe E-8D	<20	<20	---	---

One Tedlar bag sample, laboratory number 02635-29, was analyzed for SCAQMD Rule 1150.1 components, permanent gases, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 9 repeat measurements from the one Tedlar bag sample is 0.90%.

Shaw

Shaw Environmental and Infrastructure Inc.

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Company Name: *Shaw Envronmental & Infra., Inc.*
Address: *9081 Tujunga Avenue*
City / State / Zip: *Sun Valley, CA 91352*
Manager: *Darrell Thompson*
Phone/Fax Number: *(626) 535-9076*
Send Report To: *Tom Sandhu*
Address: *9081 Tujunga Avenue*
City: *Sun Valley, CA 91352*
Project Contact: *Tom Sandhu*
Phone/Fax Number: *(818) 822-5273*

Project Number: *108341.01*
Project Name: *Bradley Landfill*
Project Location: *Sun Valley, California*
Purchase Order #:
Lab Destination: *AtmAA, Inc.*
Lab Contact: *Micheal*
Lab Phone #: *(818) 223-3277*

Program
- [ ] Navy
- [ ] AFCEE
- [ ] DOT
- [x] USACE
- [ ] NPDES
- [ ] RCRA
- [ ] Other

	Shaw Sample Number	Sample Identification	Collection Information: Date	Time	Method	Matrix	# of Containers	QC Level	PRESERVATION: HCL	NaOH	HNO_3	H_2SO_4	Ice		Requesting Testing Program: Total BTU's	TOC Method 25	TAC Rule 1150.1	TRS / 307.91	Table 1 Core Group	CO2, O2, N2	ethanes	Carbon Speciation	Helium		MS/MSD = M, Field Duplicate = D
02635-29	BL-001	Probe E-8D	09/20/05	3:15	LF	A	1									x	x		x	x					

Special Instructions:

Sampler(s) Name(s): Raul Bongato

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	9-20-05		[signature]	9-20-05	1:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: [signature]	Date: 9-20-05	Time: 2:45
Turnaround Time:	Normal		Rush		

Method Codes
C = Composite
G = Grab
LF - Low Flow

Matrix Codes
DW = Drinking Water
SO = Soil
GW = Ground Water
SL = Sludge
WW = Waste Water
CP = Chip Samples
SW = Surface Water
WP = Wipe Samples
LIQ = Other Liquid
A = Air Sample
SOL = Other Solid

APPENDIX C

INTEGRATED SURFACE EMISSION MONITORING

- Field Sheets
- Laboratory Analysis
- Sample Chain-of-Custody
- Integrated Sampling QA/QC Forms
- Instrumentation Calibration

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Jesus Sanabria, Ed Gutierrez, Bill Ross, Joey Taing, Johnny Espinoza, Bic Danh, Robert Tenino

Date: 8-16-05 Instrument Used: ISS 1-8

Temperature: 68°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
1	CM	0730	0755	5	.333	3 6	
2	BR	0730	0755	8		3 6	
3	BD	0730	0755	20		3 6	
4	JS	0730	0755	8		3 6	
5	JT	0730	0755	5		3 6	
6	RT	0730	0755	15		3 6	
32	EG	0730	0755	8		3 6	
33	JE	0730	0755	8		3 6	
34	CM	0800	0825	10		3 8	
35	BR	0800	0825	5		3 8	
36	BD	0800	0825	5		3 8	
38	JS	0800	0825	5		3 8	
44	JT	0800	0825	8		3 8	
46	RT	0800	0825	8		3 8	
48	EG	0800	0825	5		3 8	
51	JE	0800	0825	5		3 8	
54	CM	0830	0855	5		3 8	
58	BR	0830	0855	8		3 8	
65	BD	0830	0855	8		3 8	
68	JS	0830	0855	5		3 8	
72	JT	0830	0855	5		3 8	
41	RT	0830	0855	10		3 8	
42	EG	0830	0855	8		3 8	
43	JE	0830	0855	5		3 8	
50	CM	0900	0925	5		5 8	
53	BR	0900	0925	10		5 8	
57	BD	0900	0925	5		5 8	
64	JS	0900	0925	5		5 8	
67	JT	0900	0925	6		5 8	
71	RT	0900	0925	8		5 8	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Jesus Sanabria, Ed Gutierrez, Bill Ross, Joey Tsang, Johnny Espinoza, Bic Dank, Robert Temino

Date: 8-16-05 Instrument Used: ISS 1-8

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
20	EG	0900	0925	5	.333	5 8	
21	JE	0900	0925	5		5 8	
22	CM	0930	0955	5		4 8	
23	BR	0930	0955	10		4 8	
37	BD	0930	0955	10		4 8	
39	JS	0930	0955	8		4 8	
45	JT	0930	0955	8		4 8	
47	RT	0930	0955	5		4 8	
49	EG	0930	0955	5		4 8	
52	JE	0930	0955	5		4 8	
55	CM	1000	1025	5		1 8	
24	BR	1000	1025	5		1 8	
40	BD	1000	1025	5		1 8	
60	JS	1000	1025	5		1 8	
59	JT	1000	1025	5		1 8	
61	RT	1000	1025	5		1 8	
79	EG	1000	1025	5		1 8	
82	JE	1000	1025	5		1 8	
86	CM	1030	1055	5		3 8	
88	BR	1030	1055	5		3 8	
94	BD	1030	1055	5		3 8	
80	JS	1030	1055	5		3 8	
83	JT	1030	1055	5		3 8	
87	RT	1030	1055	5		3 8	
89	EG	1030	1055	6		3 8	
95	JE	1030	1055	5		3 8	
56	CM	1200	1225	5		5 10	
69	BR	1200	1225	5		5 10	
70	BD	1200	1225	5		5 10	
77	JS	1200	1225	5	↓	5 10	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Jesus Sanchez, Ed Gutierrez, Bill Ross, Joey Taing, Johnny Espinoza, Bic Danh, Robert Tenino

Date: 8-16-05 Instrument Used: ISS 1-8

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
76	JT	1200	1225	5	.333	5 10	
75	RT	1200	1225	5		5 10	
78	EG	1200	1225	6		5 10	
93	JE	1200	1225	8		5 10	
107	CM	1230	1255	8		5 10	
111	BR	1230	1255	5		5 10	
112	BD	1230	1255	5		5 10	
97	JS	1230	1255	5		5 10	
101	JT	1230	1255	5		5 10	
104	RT	1230	1255	5		5 10	
108	EG	1230	1255	5		5 10	
113	JE	1230	1255	5		5 10	
98	CM	1300	1325	5		5 8	
102	BR	1300	1325	5		5 8	
105	BD	1300	1325	5		5 8	
109	JS	1300	1325	5		5 8	
110	JT	1300	1325	5		5 8	
114	RT	1300	1325	6		5 8	
115	EG	1300	1325	6		5 8	
116	JE	1300	1325	5		5 8	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

Personnel: Jesus Sanchez, Johnny Espinoza, Joey Taing, Frankie Johnson, Robert Tervino

Date: 8-17-05 Instrument Used: ISS 1-5

Temperature: 68°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
118	JS	0730	0755	5	.333	1 1	
119	JT	0730	0755	5		1 1	
123	RT	0730	0755	5		1 1	
120	JE	0730	0755	5		1 1	
125	FJ	0730	0755	5		1 1	
126	JS	0800	0825	8		5 8	
127	JT	0800	0825	8		5 8	
131	RT	0800	0825	8		5 8	
132	JE	0800	0825	5		5 8	
121	FJ	0800	0825	5		5 8	
122	JS	0830	0855	7		5 8	
117	JT	0830	0855	7		5 8	
128	RT	0830	0855	5		5 8	
129	JE	0830	0855	5		5 8	
130	FJ	0830	0855	5		5 6	
91	JS	0900	0925	5		5 6	
92	JT	0900	0925	5		5 6	
100	RT	0900	0925	5		5 6	
74	JE	0900	0925	5		5 6	
63	FJ	0900	0925	5		5 6	
62	JS	0930	0955	5		5 6	
31	JT	0930	0955	5		5 6	
10	RT	0930	0955	5		5 6	
9	JE	0930	0955	6		5 6	
8	FJ	0930	0955	5		5 6	
7	RT	1000	1025	5		5 6	
124	JT	1000	1025	5		5 6	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INTEGRATED LANDFILL SURFACE MONITORING

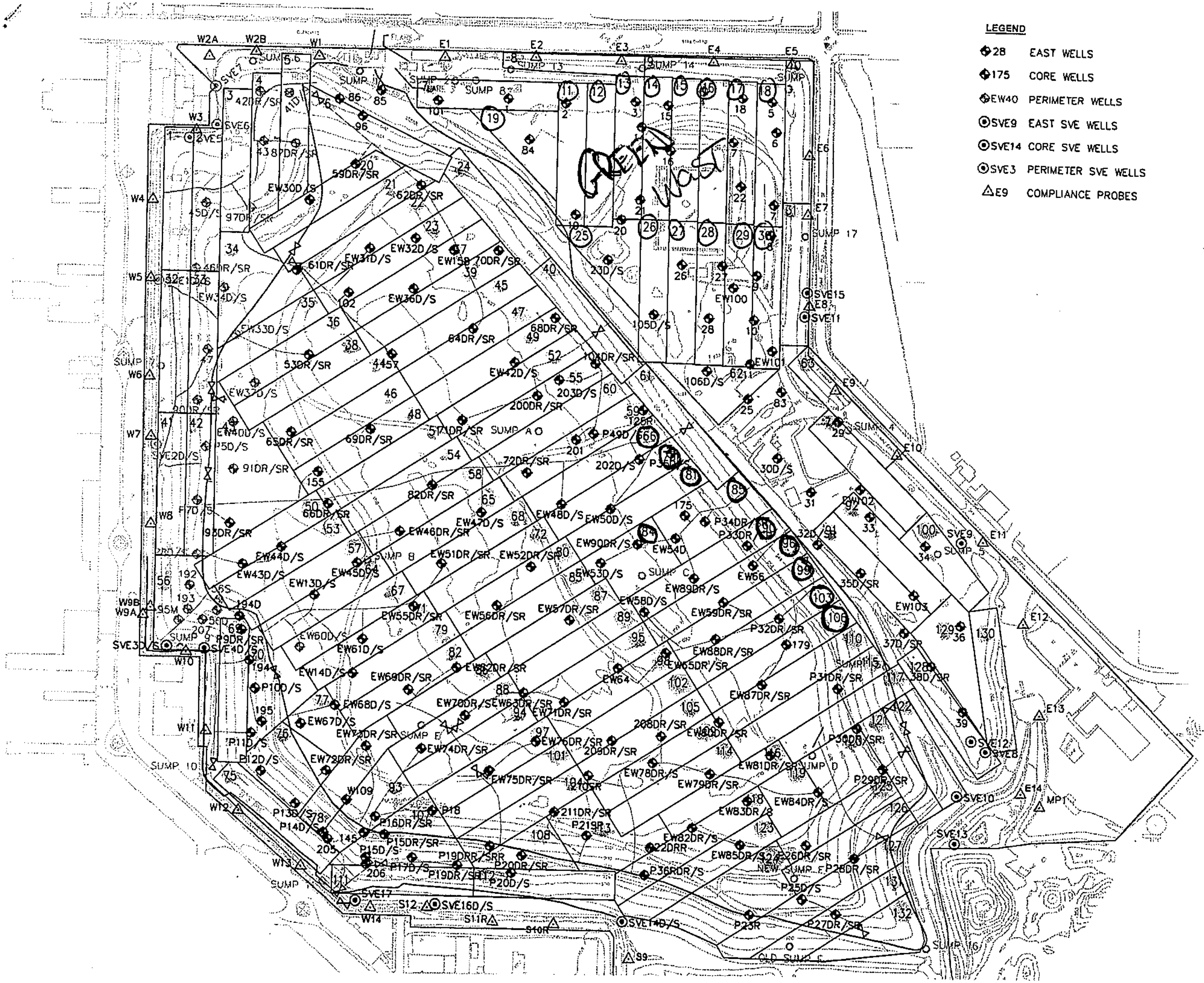
Personnel: Craig Markley

Date: 8-17-05 Instrument Used: ISS. ACTIVE AREA / GREEN WASTE.

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	ROTO-MTR, CC/MIN	WIND SPEED, MPH/DIRECT	REMARKS
19							GREEN WASTE AREA
11							
12							
13							
14							
15							
16							
17							
18							
25							
26							
27							
28							
29							
30							
66							ACTIVE AREA - Test / working.
71							
81							
85							
84							
90							
96							
99							
603							
106							

Attach Calibration Sheet
Attach site map showing grid ID


LEGEND
28 EAST WELLS
175 CORE WELLS
EW40 PERIMETER WELLS
SVE9 EAST SVE WELLS
SVE14 CORE SVE WELLS
SVE3 PERIMETER SVE WELLS
E9 COMPLIANCE PROBES

AtmAA Inc.
23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250
environmental consultants
laboratory services

LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Integrated Surface Tedlar Bag Samples

Report Date: September 8, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: August 18, 2005
Date Analyzed: August 18 & 19, 2005

AtmAA Lab No.:	02305-10	02305-11
Sample I.D.:	ISS Grid 6	ISS Grid 3
Components	*(Concentration in ppmv)*	
Methane	10.8	17.1
TGNMO	1.58	1.76
	(Concentration in ppbv)	
Hydrogen sulfide	<50	<50
Benzene	0.36	0.33
Benzylchloride	<0.5	<0.5
Chlorobenzene	<0.2	<0.2
Dichlorobenzenes*	<1.1	<1.1
1,1-dichloroethane	<0.2	<0.2
1,2-dichloroethane	<0.2	<0.2
1,1-dichloroethylene	<0.2	<0.2
Dichloromethane	0.23	<0.2
1,2-dibromoethane	<0.2	<0.2
Perchloroethylene	<0.1	<0.1
Carbon tetrachloride	0.10	0.11
Toluene	2.47	2.23
1,1,1-trichloroethane	<0.1	<0.1
Trichloroethene	<0.1	<0.1
Chloroform	<0.1	<0.1
Vinyl chloride	<0.2	<0.2
m+p-xylenes	1.75	1.57
o-xylene	0.60	0.55

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.
** total amount containing meta, para, and ortho isomers*

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: August 18, 2005
Date Analyzed: August 18 & 19, 2005

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in ppmv)			
Methane	Grid 6	10.8	10.9	10.8	0.46
TGNMO	Grid 6	1.55	1.62	1.58	2.2
		(Concentration in ppbv)			
Hydrogen sulfide	Grid 6	<50	<50	---	---
Benzene	Grid 6	0.33	0.38	0.36	7.0
Benzylchloride	Grid 6	<0.5	<0.5	---	---
Chlorobenzene	Grid 6	<0.2	<0.2	---	---
Dichlorobenzenes	Grid 6	<1.1	<1.1	---	---
1,1-dichloroethane	Grid 6	<0.2	<0.2	---	---
1,2-dichloroethane	Grid 6	<0.2	<0.2	---	---
1,1-dichloroethylene	Grid 6	<0.2	<0.2	---	---
Dichloromethane	Grid 6	<0.2	0.23	---	---
1,2-dibromoethane	Grid 6	<0.2	<0.2	---	---
Perchloroethylene	Grid 6	<0.1	<0.1	---	---
Carbon tetrachloride	Grid 6	0.10	0.10	0.10	0.0
Toluene	Grid 6	2.44	2.50	2.47	1.2
1,1,1-trichloroethane	Grid 6	<0.1	<0.1	---	---
Trichloroethene	Grid 6	<0.1	<0.1	---	---
Chloroform	Grid 6	<0.1	<0.1	---	---
Vinyl chloride	Grid 6	<0.2	<0.2	---	---
m+p-xylenes	Grid 6	1.70	1.80	1.75	2.8
o-xylene	Grid 6	0.60	0.60	0.60	0.0

Two Tedlar bag samples, laboratory numbers 02305-(10 & 11), were analyzed for SCAQMD Rule 1150.1 components, methane, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 7 repeat measurements from two Tedlar bag samples is 2.0%.

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
SHAW / Waste Management	Bradley Landfill
Project No.	**Field Logbook No.**
150.1	—
Sampler: (Print) Craig Markley	**(Signature)**
No. Of Containers 2	

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	Methane	TVMH	TOC			Remarks
Grid-6	8-17-05	0800-0825		ESS 10L Bag	X	X	X			
Grid-3	8-17-05	0800-0825		ESS 10L Bag	X	X	X			

	Date	Time		Date	Time
Relinquished by: (Signature)	8-18-05	0930	Received by: (Signature) Ron Ueschmann	8-18-05	0930
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
Sample Disposal Method:	Disposed of by: (Signature)			Date	Time

Sample Collector

RES Environmental Inc.
865 Via Lata • Colton, California 92324
(909) 422-1001 Fax (909) 422-0707

Analytical Laboratory

ATMAA Lab Inc

RES Environmental Inc.

LOCATION: Bradley

INTEGRATED SURFACE SAMPLING SHEET

GRID # 3

SAMPLE # —

CLASS # —

BAG # —

SAMPLER # 2

WIND SPEED _____ mph

WIND DIRECTION _____ 16 pt

METHANE CONCENTRATION: 10 ppm

DATE: 8-17-05

FLOW START: .333 cc

FLOW STOP: .333 cc

TIME START: 0800

TIME STOP: 0825

BAG STATUS:
(✓) FULL ( ) 3/4
( ) 1/2 ( ) 1/4

TECHNICIAN: (Signature) [signature]

THE TECHNICIAN WILL BE INSPECTING FOR THE FOLLOWING:
1. SETTLEMENT CRACKS; 2. SHRINKAGE CRACKS; 3. SLUMPING;
4. SURFACE DEPRESSION; 5. EXCESSIVELY DRY OR WET AREAS;
6. RODENT BURROWS; 7. COVER SOIL EROSIONS

COMMENTS: _____

865 Via Lata ■ Colton, California 92324 ■ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

LOCATION: Bradley

INTEGRATED SURFACE SAMPLING SHEET

GRID # 6

SAMPLE # —

CLASS # —

BAG # —

SAMPLER # 1

WIND SPEED _____ mph

WIND DIRECTION _____ 16 pt

METHANE CONCENTRATION: 5 ppm

DATE: 8-17-05

FLOW START: .333 cc

FLOW STOP: .330 cc

TIME START: 0805

TIME STOP: 0825

BAG STATUS:
(✓) FULL ( ) 3/4
( ) 1/2 ( ) 1/4

TECHNICIAN: (Signature)

THE TECHNICIAN WILL BE INSPECTING FOR THE FOLLOWING:
1. SETTLEMENT CRACKS; 2. SHRINKAGE CRACKS; 3. SLUMPING;
4. SURFACE DEPRESSION; 5. EXCESSIVELY DRY OR WET AREAS;
6. RODENT BURROWS; 7. COVER SOIL EROSIONS

COMMENTS:

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

ES
VIRONMENTAL INC.

OVA CALIBRATION LOG

Landfill: Bradley

OPERATOR INITIALS	DATE	BATTERY CHECK	FLOW METER READING	ZONE READING			CH4 CALIBRATION GAS UNCORRECTED READINGS						CH4 CALIBRATION GAS CORRECTED READINGS						3PT. CALIBRATION CHECK		
				10	100	1000	LOW		MED		HIGH		LOW		MED		HIGH				
				PPM	PPM	PPM	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	PPM	PPM
EG.	8-16-05	OK	1.5	—	—	—	—	—	50	50	—	—	—	—	50	50	—	—	—	50	—
JS	8/17/05	OK	1.5	—	—	—	—	—	50	50	—	—	—	—	50	50	—	—	—	50	—

APPENDIX D

INSTANTANEOUS SURFACE EMISSION MONITORING

- Field Sheets
- Instrumentation Calibration

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Johnny Espinoza, Jesus Sanchez, Bill Ross, Robert Tervino, Ed Gutierrez, Joey Taing

Date: 7-27-05 Instrument Used: OVA 128-88-105

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
1	CM	0730	0745	5	
2	BR	0730	0745	2,000	Next to Road
3	EG	0730	0745	10,000	Upper slope line of Flags
4	JE	0730	0745	50,000	Cells 43, 42, and on Slope
5	RT	0730	0745	50,000	Cell 41D, 87
6	JT	0730	0745	5	
7	JS	0730	0745	5	
32	CM	0745	0800	5	
33	BR	0745	0800	5	
34	EG	0745	0800	5	
41	JE	0745	0800	5	
42	RT	0745	0800	5	
56	JT	0745	0800	5	
43	JS	0745	0800	5	
69	CM	0800	0815	5	
70	BR	0800	0815	5	
76	EG	0800	0815	5	
77	JE	0800	0815	5	
75	RT	0800	0815	5	
111	JT	0800	0815	5	
112	JS	0800	0815	5	
93	CM	0815	0830	5	
28	BR	0815	0830	5	
108	EG	0815	0830	5	
113	JE	0815	0830	5	
118	RT	0815	0830	5	
119	JT	0815	0830	5	
123	JS	0815	0830	5	
124	CM	0830	0845	5	
125	BR	0830	0845	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Mackley, Johnny Espinoza, Jesus Sanabria, Bill Ross, Robert Tervino, Ed Gutierrez, Joey Taing

Date: 7-27-05 Instrument Used: OVA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
126	EG	0830	0845	5	
127	JE	0830	0845	2,000	lower slope line of flags
131	RT	0830	0845	100,000	Sump Sump F.
132	JT	0830	0845	2,000	Next To Road lower slope
116	JS	0830	0845	5	
117	CM	0845	0900	5	
121	BR	0845	0900	5	
122	EG	0845	0900	5	
128	JE	0845	0900	5	
24	RT	0845	0900	5	
40	JT	0845	0900	5	
50	JS	0845	0900	5	
53	CM	0900	0915	5	
57	BR	0900	0915	5	
64	EG	0900	0915	5	
67	JE	0900	0915	5	
71	RT	0900	0915	5	
79	JT	0900	0915	5	
82	JS	0900	0915	5	
86	CM	0915	0930	5	
88	BR	0915	0930	1,000	Well EW 74
94	EG	0915	0930	5	
97	JE	0915	0930	5	
101	RT	0915	0930	5	
104	JT	0915	0930	5	
35	JS	0915	0930	5	
36	CM	0930	0945	5	
38	BR	0930	0945	5	
44	EG	0930	0945	5	
46	JE	0930	0945	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Maddley, Johnny Espinoza, Jesus Sanchez, Bill Ross, Robert Tervino, Ed Gutierrez, Joey Taing

Date: 7-27-05 Instrument Used: OVA - 128-88-108

Temperature: 72°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
48	RT	0930	0945	5	
51	JT	0930	0945	5	
54	JS	0930	0945	5	
58	CM	0930	0945	5	
65	BR	0945	1000	5	
68	EG	0945	1000	5	
72	JE	0945	1000	5	
80	RT	0945	1000	5	
83	JT	0945	1000	5	
87	JS	0945	1000	10,000	Well EW 57, and Area Next To it
89	CM	0945	1000	5	
20	BR	1000	1015	5	
21	EG	1000	1015	5	
22	JE	1000	1015	5	
23	RT	1000	1015	5	
37	JT	1000	1015	5	
39	JS	1000	1015	5	
45	CM	1000	1015	5	
47	BR	1015	1030	5	
49	EG	1015	1030	5	
52	JE	1015	1030	5	
55	RT	1015	1030	5	
60	JT	1015	1030	5	
59	JS	1015	1030	5	
81	CM	1015	1030	5	
84	BR	1030	1045	5	
85	EG	1030	1045	5	
90	JE	1030	1045	5	
96	RT	1030	1045	5	
99	JT	1030	1045	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Johnny Espinoza, Jesus Sambrano, Bill Ross, Robert Tejeiro, Ed Gutierrez, Joey Taing

Date: 2-27-05 Instrument Used: OVA 128.88.108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
8	JT	1030	1045	5	
9	JS	1030	1045	5	
10	CM	1045	1100	5	
31	BR	1045	1100	5	
63	EG	1045	1100	5	
74	JE	1045	1100	5	
100	RT	1045	1100	5	
91	JT	1045	1100	5	
92	JS	1045	1100	5	
129	CM	1200	1215	5	
130	BR	1200	1215	5	
103	EG	1200	1215	5	
106	JE	1200	1215	5	
110	RT	1200	1215	5	
115	JT	1200	1215	1,000	Well 31
95	JS	1200	1215	5	
98	EG	1215	1230	5	
102	JE	1215	1230	5	
105	RT	1215	1230	5	
109	JT	1215	1230	5	
114	JS	1215	1230	5	
107	RT	1215	1230	5	
120	EG	1215	1230	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Madsen

Date: 7-22-05 Instrument Used: ACTIVE

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
61					ACTIVE AREA WASTE
66					
73					

Attach Calibration Sheet
Attach site map showing grid ID

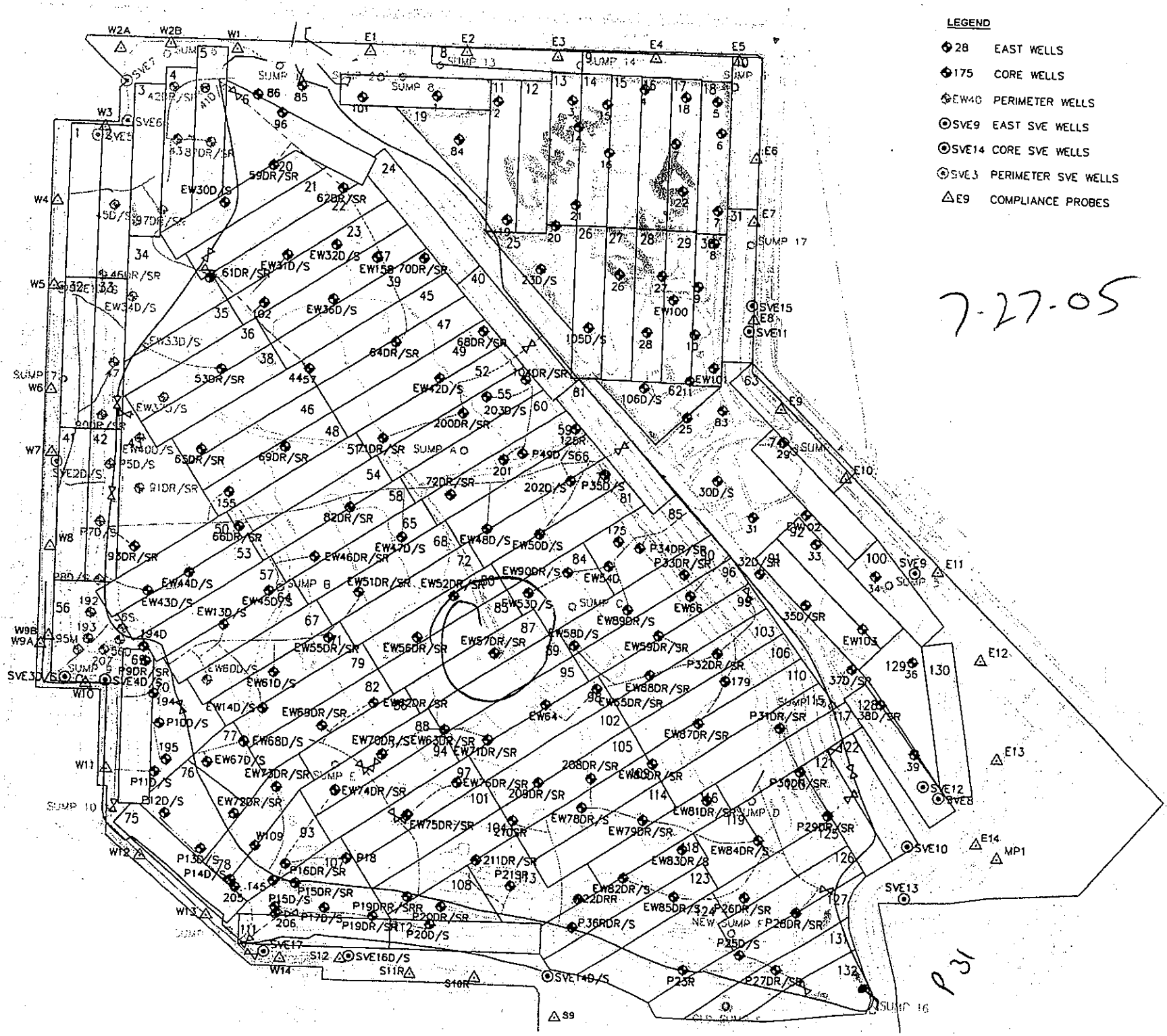
LOG OF REMEDIAL WORK FOR INSTANTANEOUS SURFACE MONITORING

Site Name: Bradley Monitoring Period: 7-27-05 Personnel: Craig Markley

Grid No.	Date	Toc	Remedial Work	Date	Toc	Remedial Work	Date	Toc
2	7-27-05	2,000	Tracic walk	8-4-05	400			
3		10,000	Tracic walk		400			
4		50,000	Tracic walk		400			
5		50,000	Tracic walk		400			
127		2,000	Tracic walk		300			
131		100,000	Tracic walk		300			
132		2,000	Tracic walk		300			
115		1,000	adj. well		200			
87		10,000	Water / Fill dirt		100			
88		1,000	adj. well		200			

1. Monitoring Date
2. TOC Reading in PPM

Signature:


LEGEND
28 EAST WELLS
175 CORE WELLS
EW40 PERIMETER WELLS
SVE9 EAST SVE WELLS
SVE14 CORE SVE WELLS
SVE3 PERIMETER SVE WELLS
E9 COMPLIANCE PROBES
7-27-05
P31

RES
ENVIRONMENTAL INC.

OVA CALIBRATION LOG

Landfill: Bradley Landfill

OPERATOR INITIALS	DATE	BATTERY CHECK	FLOW METER READING	ZONE READING			CH4 CALIBRATION GAS UNCORRECTED READINGS						CH4 CALIBRATION GAS CORRECTED READINGS						3PT. CALIBRATION CHECK		
				10	100	1000	LOW		MED		HIGH		LOW		MED		HIGH				
				PPM	PPM	PPM	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	PPM	PPM
CM	7/7/05	OK	1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
BR	↓	↓	2.0	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
JE			2.0	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
EG			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
RT			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
JS			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
RT			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
											500	500					500	500	—	—	500

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Joey Taing, Ed Gutierrez, Jesus Sanchez, Bic Dank, Johnny Espinoza, Franzelle Johnson

Date: 8-30-05 Instrument Used: OVA 128-88-108

Temperature: 70°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
1	CM	0715	0730	1,000	Small Area on slope.
2	JS	0715	0730	10,000	Area on Slope
3	JE	0715	0730	5	
4	JT	0715	0730	100,000	Well 42, 43 and Area on Slope
5	BD	0715	0730	100,000	Well 87, and around well Flags
6	FJ	0715	0730	1,000	Well 86
7	EG	0715	0730	5	
32	CM	0730	0745	5	
33	JS	0730	0745	5	
41	JE	0730	0745	5	
42	JT	0730	0745	5	
56	BD	0730	0745	5	
69	FJ	0730	0745	5	
75	EG	0730	0745	5	
76	CM	0745	0800	5,000	Well P13D/S
77	JS	0745	0800	5	
78	JE	0745	0800	5	
93	JT	0745	0800	5	
107	BD	0745	0800	5	
108	FJ	0745	0800	5	
111	EG	0745	0800	100,000	line of Flags above Header Pipe.
112	CM	0800	0815	100,000	line of Flags above Header Pipe.
70	JS	0800	0815	5	
113	JE	0800	0815	5	
118	JT	0800	0815	5	
123	BD	0800	0815	5	
124	FJ	0800	0815	5	
127	EG	0800	0815	5	
131	CM	0815	0830	5	
132	JS	0815	0830	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Joey Taing, Ed Gutierrez, Jesus Sanchez, Bic Dante, Johnny Espinoza, Franzelle Johnson

Date: 8-30-05 Instrument Used: OVA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
119	JE	0815	0830	5	
116	JT	0815	0830	5	
114	BD	0815	0830	5	
109	FJ	0815	0830	5	
105	EG	0815	0830	5	
102	CM	0830	0845	5	
104	JS	0830	0845	5	
101	JE	0830	0845	5	
97	JT	0830	0845	5	
43	BD	0830	0845	5	
50	FJ	0830	0845	5	
53	EG	0830	0845	5	
57	CM	0845	0900	5	
64	JS	0845	0900	5	
67	JE	0845	0900	5	
71	JT	0845	0900	5	
79	BD	0845	0900	5	
82	FJ	0845	0900	5	
86	EG	0845	0900	5	
88	EM	0900	0915	5,000	EW 74 DR/SR
94	JS	0900	0915	5	
34	JE	0900	0915	5	
35	JT	0900	0915	5	
36	BD	0900	0915	5	
38	FJ	0900	0915	5	
44	EG	0900	0915	5	
46	CM	0915	0930	5	
48	JS	0915	0930	5	
51	JE	0915	0930	5	
54	JT	0915	0930	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Mackley, Joey Taing, Ed Gutierrez, Jesus Sanchez, Bic Dank, Johnny Espinoza, Franzelle Johnson

Date: 8-30-05 Instrument Used: OVA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
58	DD	0915	0930	5	
65	FJ	0915	0930	5	
68	EG	0915	0930	5	
72	CM	0930	0945	5	
80	JS	0930	0945	5	
83	JE	0930	0945	5	
87	JT	0930	0945	1,000	EW 57
89	DD	0930	0945	2,000	Well 63
95	FJ	0930	0945	5	
98	EG	0930	0945	5	
20	CM	0945	1000	5	
21	JS	0945	1000	5	
22	JE	0945	1000	5	
23	JT	0945	1000	5	
37	DD	0945	1000	5	
39	FJ	0945	1000	5	
45	EG	0945	1000	5	
47	CM	1000	1015	5	
49	JS	1000	1015	1,000	Well 68 DR/SR
52	JE	1000	1015	5	
55	JT	1000	1015	5	
60	DD	1000	1015	5	
59	FJ	1000	1015	5	
66	EG	1000	1015	5	
73	CM	1015	1030	5	
81	JS	1015	1030	5	
84	JE	1015	1030	5000	Well EW 90, EW 53 and Sump C
85	JT	1015	1030	5	
90	DD	1015	1030	5	
96	FJ	1015	1030	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Madrley, Joey Taing, Ed Gutierrez, Jesus Sanchez, Bic Dank, Johnny Espinoza, Franzelle Johnson

Date: 8.30.05 Instrument Used: OVA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
99	EG	1015	1030	5	
24	CM	1030	1045	5	
40	JS	1030	1045	5	
61	JE	1030	1045	1,000	On Slope Below well 125.
8	JT	1030	1045	5	
9	BD	1030	1045	5	
10	FJ	1030	1045	5	
31	EG	1030	1045	5	
62	CM	1045	1100	5	
63	JS	1045	1100	5	
74	JE	1045	1100	5	
91	JT	1045	1100	5	
92	BD	1045	1100	5	
100	FJ	1045	1100	5	
130	EG	1045	1100	5	
128	CM	1200	1215	5	
19	JS	1200	1215	5	
11	JE	1200	1215	5	
12	JT	1200	1215	5	
13	BD	1200	1215	5	
14	FJ	1200	1215	5	
15	EG	1200	1215	5	
16	CM	1215	1230	5	
17	JS	1215	1230	5	
18	JE	1215	1230	5	
25	JT	1215	1230	5	
26	BD	1215	1230	5	
27	FJ	1215	1230	5	
28	EG	1215	1230	5	
29	CM	1230	1245	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Jesus Sanchez
Johnny Espinoza

Date: 8-30-05 Instrument Used: OVA 128-58-105

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
30	JS	1230	1245	5	
103	JE	1220	1245	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley

Date: 8.30.05 Instrument Used: Active Area

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
106					Active Areas
110					
115					
117					
120					
121					
122					
125					
126					

Attach Calibration Sheet
Attach site map showing grid ID

LOG OF REMEDIAL WORK FOR Instantaneous SURFACE MONITORING

Site Name: Bradley Landfill Monitoring Period: 8-30-05 Personnel: Craig Markley

Grid No.	Date	Toc	Remedial Work	Date	Toc	Remedial Work	Date	Toc
1	8/30/05	1,000						
2		10,000						
4		100,000						
5		100,000						
76		5,000						
88		5,000						
111		100,000						
112		100,000						
6		1,000						
77		5,000						
88		5,000						
87		1,000						
89		2,000						
49		1,000						
84		5,000						
61		1,000						

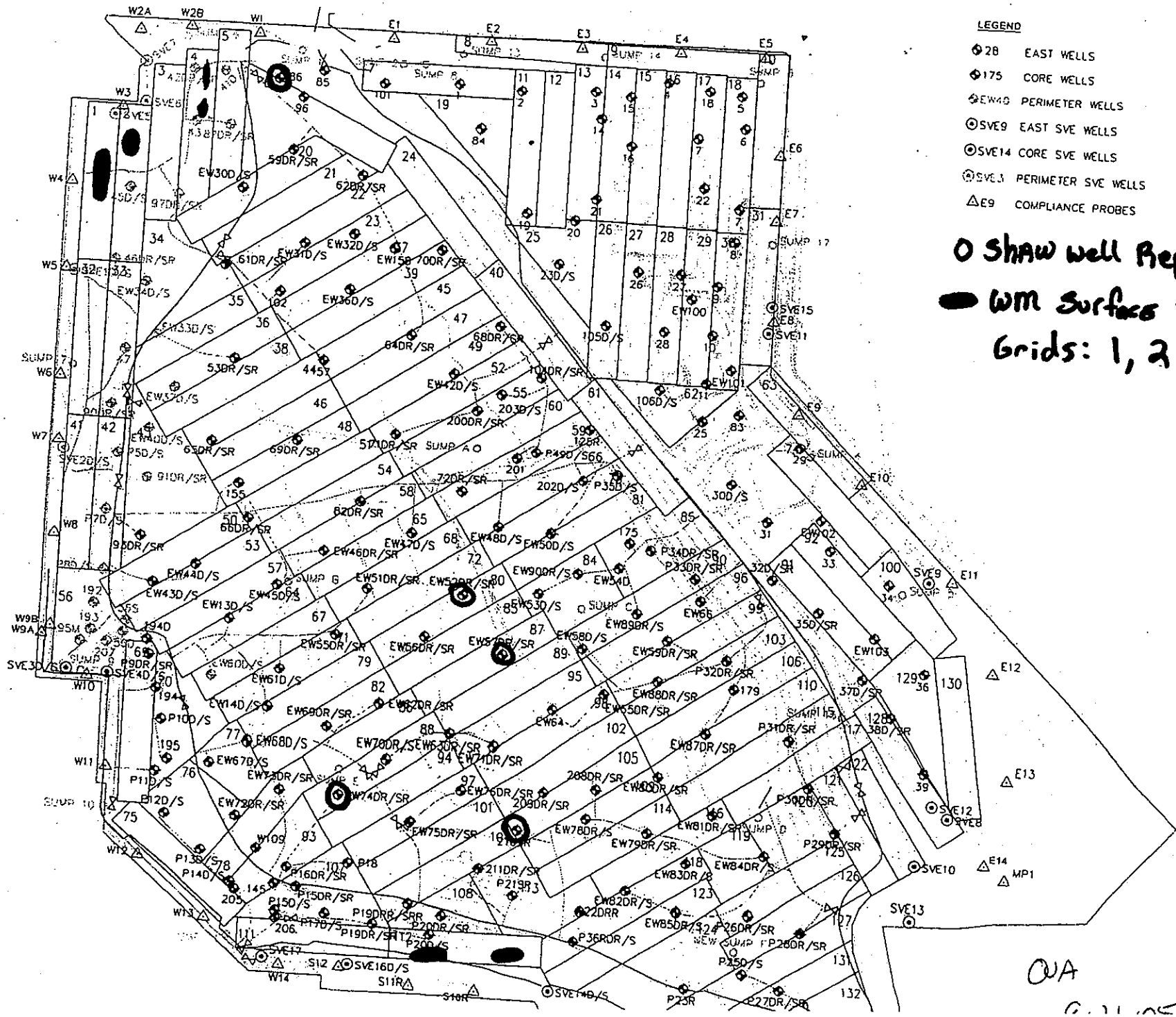
1. Monitoring Date
2. TOC Reading in PPM

Signature:

LOG OF REMEDIAL WORK FOR INSTANTANEOUS SURFACE MONITORING
REMONITORING SUMMARY

SITE NAME: Bradley Landfill & Recycling Center **Initial Monitoring:** 8/30/2005 **Shaw Technician:** PAUL BONGATO

Monthly Instantaneous Monitoring					1st Remonitoring				2nd Remonitoring			
Grid No.	Loc	Date	TOC	Monitored By	Remedial Work	Date	TOC	Monitored By	Remedial Work	Date	TOC	Monitored By
1	Small area on slope	8/30/05	1,000	RES	repaired surface	9/9/05	5-10	Shaw				Shaw
2	Area on slope	8/30/05	10,000	RES	repaired surface	9/9/05	30-50	Shaw				Shaw
4	Well 42, 43 and area on slope	8/30/05	100,000	RES	repaired surface	9/1/05	60	Shaw				Shaw
5	Well 87 around well flange	8/30/05	100,000	RES	repaired surface	9/1/05	5-10	Shaw				Shaw
76	Well P13 D/S	8/30/05	5,000	RES	repaired surface	9/1/05	5-20	Shaw				Shaw
88	EW74 DR/SR	8/30/05	5,000	RES	repaired surface	9/1/05	10-20	Shaw				Shaw
111	line of flags above header pipe	8/30/05	100,000	RES	repaired surface	9/9/05	50-100	Shaw				Shaw
112	line of flags above header pipe	8/30/05	100,000	RES	repaired surface	9/9/05	100-200	Shaw				Shaw
6	Well 86	8/30/05	1,000	RES	repaired surface	9/1/05	5-20	Shaw				Shaw
88	EW74 DR/SR	8/30/05	5,000	RES	repaired surface	9/1/05	30-40	Shaw				Shaw
87	EW57	8/30/05	1,000	RES	repaired surface	9/1/05	5-10	Shaw				Shaw
89	Well 63	8/30/05	2,000	RES	repaired surface	9/1/05	5-10	Shaw				Shaw
49	Well 68 DR / SR	8/30/05	1,000	RES	repaired surface	9/1/05	10-20	Shaw				Shaw
84	Well EW90, EW53 and Sump C	8/30/05	5,000	RES	repaired surface	9/1/05	5-10	Shaw				Shaw
61	On slope below well 125	8/30/05	1,000	RES	repaired surface	9/9/05	5-10	Shaw				Shaw


LEGEND
28 EAST WELLS
175 CORE WELLS
EW40 PERIMETER WELLS
SVE9 EAST SVE WELLS
SVE14 CORE SVE WELLS
SVE3 PERIMETER SVE WELLS
E9 COMPLIANCE PROBES
0 SHAW well Repairs
WM Surface Repairs
Grids: 1, 2 & 112
OUA

ES

NVIRONMENTAL INC.

OVA CALIBRATION LOG

Landfill: Bradley Landfill

OPERATOR INITIALS	DATE	BATTERY CHECK	FLOW METER READING	ZONE READING			CH4 CALIBRATION GAS UNCORRECTED READINGS						CH4 CALIBRATION GAS CORRECTED READINGS						3PT. CALIBRATION CHECK		
				10	100	1000	LOW		MED		HIGH		LOW		MED		HIGH				
				PPM	PPM	PPM	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	PPM	PPM
CM	8/30/05	OK	1.5								500	500					500	500			500
JS			2.0								500	500					500	500			500
JE			1.5								500	500					500	500			500
JT			1.5								500	500					500	500			500
BD			1.5								500	500					500	500			500
FJ			2.0								500	500					500	500			500
EG	↓	↓	1.5								500	500					500	500			500

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Madsley, Bic Dahne, _____
Johnny Espinoza, Joey Taing, _____
Ed Curtiener, Francelle Johnson, _____

Date: 9-21-05 Instrument Used: OVA 128-88-108

Temperature: 70°

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
1	CM	0730	0745	5,000	Line of Flags lower slope
2	JE	0730	0745	5,000	Flags on Slope
32	EG	0730	0745	5	
33	BD	0730	0745	5	
41	JT	0730	0745	5	
42	FJ	0730	0745	5	
56	CM	0745	0800	5	
69	JE	0745	0800	5	
70	EG	0745	0800	5	
25	BD	0745	0800	5	
76	JT	0745	0800	5	
77	FJ	0745	0800	5	
34	CM	0800	0815	5	
35	JE	0800	0815	5	
36	EG	0800	0815	5	
38	BD	0800	0815	5	
37	JT	0800	0815	5	
43	FJ	0800	0815	5	
50	CM	0815	0830	5	
53	JE	0815	0830	5	
57	EG	0815	0830	5	
64	BD	0815	0830	5	
67	JT	0815	0830	5	
71	FJ	0815	0830	5	
79	CM	0830	0845	5	
82	JE	0830	0845	5	
78	EG	0830	0845	5	
86	BD	0830	0845	5	
88	JT	0830	0845	3,000	Well 74 DA/SR
93	FJ	0830	0845	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Bic Dank, Johnny Espinoza, Joey Tang, Ed Curticiere, Francene Johnson

Date: 9-21-05 Instrument Used: OVA 128-88-108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
94	CM	0845	0900	5	
97	JE	0845	0900	5	
101	EG	0845	0900	5	
107	BD	0845	0900	5	
108	JT	0845	0900	5	
111	FJ	0845	0900	5	
112	CM	0900	0915	10,000	Next to Black pipe line of Flags.
104	JE	0900	0915	5	
113	EG	0900	0915	5	
132	BD	0900	0915	5	
131	JT	0900	0915	5	
127	FJ	0900	0915	5	
123	CM	0915	0930	5	
124	JE	0915	0930	5	
118	EG	0915	0930	5	
116	BD	0915	0930	5	
117	JT	0915	0930	5	
128	FJ	0915	0930	5	
114	CM	0930	0945	5	
109	JE	0930	0945	5	
105	EG	0930	0945	10,000	Well 210
102	BD	0930	0945	5	
98	JT	0930	0945	5	
95	FJ	0930	0945	5	
89	CM	0945	1000	5	
87	JE	0945	1000	1,000	Well 57 DR/SR
83	EG	0945	1000	5	
80	BD	0945	1000	1,000	Well 52 DR/SR
72	JT	0945	1000	5	
68	FJ	0945	1000	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Bic Dahne, Johnny Espinoza, Joey Tang, Ed Gutticza, Franzella Johnson

Date: 9-21-05 Instrument Used: OVA - 128, 88, 108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
65	CM	1000	1015	5	
58	JE	1000	1015	5	
54	EG	1000	1015	5	
51	BD	1000	1015	5	
48	JT	1000	1015	5	
46	FJ	1000	1015	5	
44	CM	1015	1030	5	
3	JE	1015	1030	5	
4	EG	1015	1030	10,000	ON Slope line of Flags
5	BD	1015	1030	5	
6	JT	1015	1030	5,000	Well 86
7	FJ	1015	1030	5	
8	CM	1030	1045	5	
9	JE	1030	1045	5	
10	EG	1030	1045	5	
31	BD	1030	1045	5	
24	JT	1030	1045	5	
40	FJ	1030	1045	5	
61	CM	1045	1100	5	
85	JE	1045	1100	5	
20	EG	1045	1100	5	
21	BD	1045	1100	5	
22	JT	1045	1100	5	
23	FJ	1045	1100	5	
39	CM	1200	1215	5	
45	JE	1200	1215	5	
47	EG	1200	1215	5	
49	BD	1200	1215	5	
52	JT	1200	1215	5	
55	FJ	1200	1215	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley, Johnny Espinoza, Ed Gutierrez, Bic Dacho, Joey Taing, Franzelle Johnson

Date: 9-21-05 Instrument Used: 128, 88, 108

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
60	CM	1215	1230	5	
59	JE	1215	1230	5	
66	EG	1215	1230	5	
73	DD	1215	1230	5	
81	JT	1215	1230	5	
84	FJ	1215	1230	5	
90	CM	1230	1245	5	
96	JE	1230	1245	5	
99	EG	1230	1245	5	
103	DD	1230	1245	5	
106	JT	1230	1245	5	
110	FJ	1230	1245	5	
115	CM	1245	1300	5	
63	JE	1245	1300	5	
74	EG	1245	1300	5	
92	DD	1245	1300	5	
91	JT	1245	1300	5	
100	FJ	1245	1300	5	
129	JE	1300	1315	5	
130	JT	1300	1315	5	

Attach Calibration Sheet
Attach site map showing grid ID

BRADLEY LANDFILL

INSTANTANEOUS LANDFILL SURFACE MONITORING

Personnel: Craig Markley

Date: 9-21-05 Instrument Used: ACTIVE Areas.

Temperature: _____

GRID ID	STAFF INITIALS	START TIME	STOP TIME	TOC PPM	REMARKS
19					Green Waste
11					
12					
13					
14					
15					
16					
17					
18					
25					
26					
27					
28					
29					
30					
62					
119					ACTIVE Area, Waste
120					
121					
122					
125					
126					

Attach Calibration Sheet
Attach site map showing grid ID

LOG OF REMEDIAL WORK FOR INSTANTANEOUS SURFACE MONITORING

Site Name: Bradley Landfill Monitoring Period: 9-21-05 Personnel:

	INITIAL MONITORING		FIRST	FIRST MONITORING		SECOND	SECOND MONITORING	
Grid No.	Date	Toc	Remedial Work	Date	Toc	Remedial Work	Date	Toc
1	9/21/05	5,000						
2		5,000						
88		3,000						
112		10,000						
105		10,000						
87		1,000						
80		1,000						
4		10,000						
6	✓	5,000						

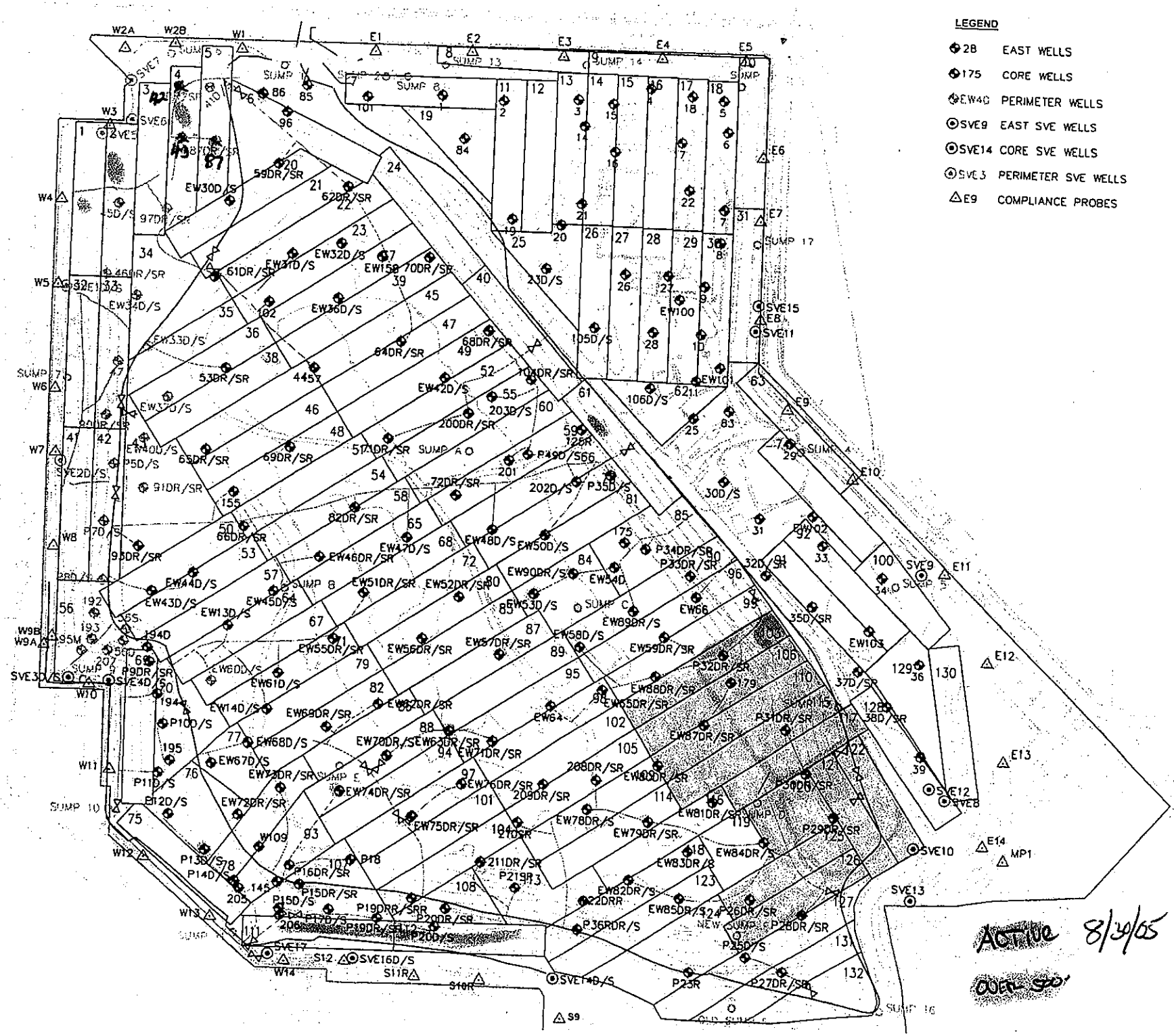
1. Monitoring Date
2. TOC Reading in PPM

Signature:

TABLE G-1
LOG OF REMEDIAL WORK FOR INSTANTANEOUS SURFACE MONITORING
REMONITORING SUMMARY

SITE NAME: Bradley Landfill & Recycling Center **Initial Monitoring:** 9/21/2005 **Shaw Technician:** Raul Bongato

Monthly Instantanous Monitoring					1st Remonitoring				2nd Remonitoring			
Grid No.	Loc	Date	TOC	Monitored By	Remedial Work	Date	TOC	Monitored By	Remedial Work	Date	TOC	Monitored By
1	line of flags lower slope	9/21/05	5,000	RES	Repaired surface	10/3/2005	5 - 30	Shaw				Shaw
2	Flags on slope	9/21/05	5,000	RES	Repaired surface	10/3/2005	5 - 30	Shaw				Shaw
88	Well EW74 DR/SR	9/21/05	3,000	RES	Repaired surface	9/26/2005	5 - 10	Shaw				Shaw
112	Next to black pipe line of flags	9/21/05	10,000	RES	Repaired surface	10/3/2005	20 - 80	Shaw				Shaw
105	Well 210	9/21/05	10,000	RES	Repaired surface	9/23/2005	5 - 20	Shaw				Shaw
87	Well EW57 DR/SR	9/21/05	1,000	RES	Repaired surface	9/23/2005	10 - 150	Shaw				Shaw
80	Well EW52 DR/SR	9/21/05	1,000	RES	Repaired surface	9/23/2005	5 - 40	Shaw				Shaw
4	On slope line of flags	9/21/05	10,000	RES	Repaired surface	10/3/2005	5 - 40	Shaw				Shaw
6	Well 86	9/21/05	5,000	RES	Repaired surface	9/26/2005	5 - 10	Shaw				Shaw


LEGEND
28 EAST WELLS
175 CORE WELLS
EW40 PERIMETER WELLS
SVE9 EAST SVE WELLS
SVE14 CORE SVE WELLS
SVE3 PERIMETER SVE WELLS
E9 COMPLIANCE PROBES
ACTIVE 8/29/05

RES
ENVIRONMENTAL INC.

OVA CALIBRATION LOG

Landfill: Bradley Landfill

OPERATOR INITIALS	DATE	BATTERY CHECK	FLOW METER READING	ZONE READING			CH4 CALIBRATION GAS UNCORRECTED READINGS						CH4 CALIBRATION GAS CORRECTED READINGS						3PT. CALIBRATION CHECK		
				10	100	1000	LOW		MED		HIGH		LOW		MED		HIGH				
				PPM	PPM	PPM	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	ACT	PPM	PPM	PPM
CM	9/21/05	OK	1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
JE	↓	↓	2.0	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
EG			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
BD			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
JT			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500
FJ			1.5	—	—	—	—	—	—	—	500	500	—	—	—	—	500	500	—	—	500

APPENDIX E

LANDFILL GAS SAMPLING

- Laboratory Analysis
- Chain-of-Custody

AtmAA Inc.
23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Landfill Gas Tedlar Bag Samples

Report Date: September 7, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: August 30, 2005
Date Analyzed: August 31, 2005

AtmAA Lab No.:	02425-11	02425-12	02425-13	02425-14
Sample I.D.:	Flare #1 BL-002	Flare #2 BL-003	Flare #3 BL-004	Gas Plant BL-005
Components		*(Concentration in %,v)*		
Nitrogen	17.7	41.4	32.0	20.8
Oxygen	1.67	4.06	3.44	1.95
Methane	43.1	27.3	32.3	41.4
Carbon dioxide	36.0	25.9	29.7	34.6
		(Concentration in ppmv)		
TGNMO	5520	1250	7180	10700
Hydrogen sulfide	53.1	32.4	13.7	54.8
		(Concentration in ppbv)		
Benzene	2280	647	8270	2990
Benzylchloride	<40	<40	<40	<40
Chlorobenzene	83.6	51.2	152	209
Dichlorobenzenes*	<30	<30	<30	1880
1,1-dichloroethane	176	56.0	129	163
1,2-dichloroethane	51.9	21.3	51.4	67.6
1,1-dichloroethylene	58.8	<40	50.1	57.0
Dichloromethane	490	<30	246	357
1,2-dibromoethane	<30	<30	<30	<30
Perchloroethylene	1120	453	1140	1750
Carbon tetrachloride	<30	<30	<30	<30
Toluene	19300	1230	22400	35600
1,1,1-trichloroethane	<20	<20	<20	<20
Trichloroethene	448	124	446	614
Chloroform	<20	<20	<20	<20
Vinyl chloride	236	604	333	194
m+p-xylenes	4870	1220	7920	18200
o-xylene	1620	513	2600	6430
		(Unit / ft.3)		
BTU	440.	277	332	427

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon.
The accuracy of the TCD/GC Method for permanent gases is +/- 2%, actual results are reported.
TGNMO is total gaseous non-methane organics measured and reported as ppm methane.
** total amount containing meta, para, and ortho isomers*
BTU is calculated from the analysis of methane and TGNMO.

Michael L. Porter
Laboratory Director

AtmAA Inc.
23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

Hydrogen Sulfide and Reduced Sulfur Compounds Analysis
in Landfill Gas Tedlar Bag Samples

Report Date: September 7, 2005
Client: Shaw Environmental
Project Location: Bradley Landfill
Date Received: August 30, 2005
Date Analyzed: August 31, 2005

ANALYSIS DESCRIPTION

Hydrogen sulfide was analyzed by gas chromatography with a Hall electrolytic conductivity detector operated in the oxidative sulfur mode. All other sulfur components were measured by GC/ Mass Spec.

AtmAA Lab No.:	02425-11	02425-12	02425-13	02425-14
Sample I.D.:	Flare #1 BL-002	Flare #2 BL-003	Flare #3 BL-004	Gas Plant BL-005
Components	*(Concentration in ppmv)*			
Hydrogen sulfide	53.1	32.4	13.7	54.8
Carbonyl sulfide	0.30	0.091	0.22	0.35
Methyl mercaptan	4.88	0.31	3.38	4.45
Ethyl mercaptan	<0.1	<0.1	<0.1	<0.1
Dimethyl sulfide	5.94	0.15	8.08	6.38
Carbon disulfide	0.086	0.085	0.070	0.099
Isopropyl mercaptan	0.36	<0.06	0.15	0.33
n-propyl mercaptan	<0.06	<0.06	<0.06	<0.06
Dimethyl disulfide	0.30	0.085	0.43	0.29
TRS	65.4	32.4	13.7	54.8

TRS - total reduced sulfur

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: August 30, 2005
Date Analyzed: August 31, 2005

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in %,v)			
Nitrogen	Flare #1	17.8	17.6	17.7	0.56
Oxygen	Flare #1	1.67	1.67	1.67	0.0
Methane	Flare #1	43.0	43.2	43.1	0.23
Carbon dioxide	Flare #1	35.8	36.2	36.0	0.56
		(Concentration in ppmv)			
TGNMO	Flare #1	5640	5390	5520	2.3
		(Concentration in ppbv)			
Benzene	Flare #1	2270	2290	2280	0.44
Benzylchloride	Flare #1	<40	<40	---	---
Chlorobenzene	Flare #1	82.7	84.6	83.6	1.1
Dichlorobenzenes	Flare #1	<30	<30	---	---
1,1-dichloroethane	Flare #1	174	177	176	0.85
1,2-dichloroethane	Flare #1	51.5	52.3	51.9	0.77
1,1-dichloroethylene	Flare #1	56.8	60.8	58.8	3.4
Dichloromethane	Flare #1	490	489	490	0.10
1,2-dibromoethane	Flare #1	<30	<30	---	---
Perchloroethylene	Flare #1	1110	1140	1120	1.3
Carbon tetrachloride	Flare #1	<30	<30	---	---
Toluene	Flare #1	19100	19500	19300	1.0
1,1,1-trichloroethane	Flare #1	<20	<20	---	---
Trichloroethene	Flare #1	439	458	448	2.1

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in ppbv)			
Chloroform	Flare #1	<20	<20	---	---
Vinyl chloride	Flare #1	234	237	236	0.64
m+p-xylenes	Flare #1	4770	4970	4870	2.0
o-xylene	Flare #1	1560	1680	1620	3.7
Sulfur Components		*(Concentration in ppmv)*			
Hydrogen sulfide	Flare #2	53.0	53.2	53.1	0.19
	Flare #2	32.4	32.4	32.4	0.0
	Flare #3	14.4	13.0	13.7	5.1
	Gas Plant	54.6	55.1	54.8	0.46
Carbonyl sulfide	Flare #2	0.31	0.30	0.30	1.6
Methyl mercaptan	Flare #2	4.77	5.00	4.88	2.4
Ethyl mercaptan	Flare #2	<0.1	<0.1	---	---
Dimethyl sulfide	Flare #2	5.81	6.06	5.94	2.1
Carbon disulfide	Flare #2	0.085	0.087	0.086	1.2
iso-propyl mercaptan	Flare #2	0.35	0.36	0.36	1.4
n-propyl mercaptan	Flare #2	<0.06	<0.06	---	---
Dimethyl disulfide	Flare #2	0.26	0.34	0.30	13

Four Tedlar bag samples, laboratory numbers 02425-(11-14), were analyzed for SCAQMD 1150.1 components, permanent gases, TGNMO, hydrogen sulfide, and reduced sulfur compounds. Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 27 repeat measurements from the four Tedlar bag samples is 1.8%.

CHAIN OF CUSTODY

Ref. Document # _____

Page 1 of 1

Shaw Environmental and Infrastructure Inc.

Company Name: *Shaw Environmental & Infra., Inc.*
Address: *9081 Tujunga Avenue*
City / State / Zip: *Sun Valley, CA 91352*
Manager: *Darrell Thompson*
Phone/Fax Number: *(626) 535-9076*
Send Report To: *Tom Sandhu*
Address: *9081 Tujunga Avenue*
City: *Sun Valley, CA 91352*
Project Contact: *Tom Sandhu*
Phone/Fax Number: *(818) 822-5273*

Project Number: *108341.01*
Project Name: *Bradley Landfill*
Project Location: *Sun Valley, California*
Purchase Order #:
Lab Destination: *AtmAA, Inc.*
Lab Contact: *Micheal*
Lab Phone #: *(818) 223-3277*

Program: Navy ☐ AFCEE ☐ DOT ☐ USACE ☒ NPDES ☐ RCRA ☐ Other ☐

02425

	Shaw Sample Number	Sample Identification	Collection Information: Date	Time	Method	Matrix	# of Containers	QC Level	PRESERVATION: HCL	NaOH	HNO_3	H_2SO_4	Ice	Requesting Testing Program: Total BTU's	TOC Method 25	TAC Rule 1150.1	TRS / 307.91	Table 1 Cone Group	CO_2, O_2, N_2	ethanes	Carbon Speciation	Helium	MS/MSD = M, Field Duplicate = D
10	BL-001	Probe E-8D	08/29/05	3:15	LF	A	1								x	x		x	x				
11	BL-002	Flare No. 1	08/30/05	8:30	LF	A	1							x	x	x	x	x	x				
12	BL-003	Flare No. 2	08/30/05	9:00	LF	A	1							x	x	x	x	x	x				
13	BL-004	Flare No. 3	08/30/05	9:30	LF	A	1							x	x	x	x	x	x				
14	BL-005	Gas Compressor	08/30/05	1:30	LF	A	1							x	x	x	x	x	x				

Special Instructions:

Sampler(s) Name(s): Raul Bongato

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Thomas Sandhu	8/30/05	4:07 PM	Ray ACS	8-30-05	4:07
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
				8/31/05	1850
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Turnaround Time: Normal ☐ Rush ☐

Method Codes

C = Composite G = Grab
LF - Low Flow

Matrix Codes

DW = Drinking Water SO = Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples
SW = Surface Water WP = Wipe Samples
LIQ = Other Liquid A = Air Sample
SOL = Other Solid

APPENDIX F

AMBIENT AIR SAMPLING

- Laboratory Analysis
- Chain of Custody
- Wind Speed and Direction Records

AtmAA Inc.
23917 Craftsman Rd., Calabasas, CA 91302 • (818) 223-3277 • FAX (818) 223-8250

LABORATORY ANALYSIS REPORT

environmental consultants
laboratory services

SCAQMD Rule 1150.1 Components Analysis in Ambient Air Tedlar Bag Samples

Report Date: July 27, 2005
Client: Waste Management
Project Location: Bradley Landfill
Date Received: July 18, 2005
Date Analyzed: July 18-20, 2005

AtmAA Lab No.:	01995-14	01995-15	01995-16	01995-17
Sample I.D.:	Ambient Air AA-1	Ambient Air AA-2	Ambient Air AA-3	Ambient Air AA-4
Components	*(Concentration in ppmv)*			
Methane	3.52	2.33	6.94	1.93
TGNMO	2.46	2.63	2.08	2.16
	(Concentration in ppbv)			
Hydrogen sulfide	<50	<50	<50	<50
Benzene	0.66	0.69	0.63	0.81
Benzylchloride	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	<0.2	<0.2	<0.2	<0.2
Dichlorobenzenes*	<1.1	<1.1	<1.1	<1.1
1,1-dichloroethane	<0.2	<0.2	<0.2	<0.2
1,2-dichloroethane	<0.2	<0.2	<0.2	<0.2
1,1-dichloroethylene	<0.2	<0.2	<0.2	<0.2
Dichloromethane	0.34	<0.2	0.29	<0.2
1,2-dibromoethane	<0.2	<0.2	<0.2	<0.2
Perchloroethylene	<0.1	<0.1	<0.1	<0.1
Carbon tetrachloride	0.12	0.11	0.11	0.13
Toluene	2.23	2.12	1.01	1.27
1,1,1-trichloroethane	<0.1	<0.1	<0.1	<0.1
Trichloroethene	<0.1	<0.1	<0.1	<0.1
Chloroform	<0.1	<0.1	<0.1	<0.1
Vinyl chloride	<0.2	<0.2	<0.2	<0.2
m+p-xylenes	1.36	1.24	1.20	0.78
o-xylene	0.48	0.46	0.46	0.28

TGNMO is total gaseous non-methane organics measured and reported as ppm methane.
** total amount containing meta, para, and ortho isomers*

Michael L. Porter
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Bradley Landfill
Date Received: July 18, 2005
Date Analyzed: July 18-20, 2005

Components	Sample ID	Repeat Analysis Run #1	Repeat Analysis Run #2	Mean Conc.	% Diff. From Mean
		(Concentration in ppmv)			
Methane	AA-1	3.51	3.52	3.52	0.14
TGNMO	AA-1	2.54	2.37	2.46	3.5
		(Concentration in ppbv)			
Hydrogen sulfide	AA-1	<50	<50	---	---
Benzene	AA-1	0.75	0.56	0.66	14
Benzylchloride	AA-1	<0.5	<0.5	---	---
Chlorobenzene	AA-1	<0.2	<0.2	---	---
Dichlorobenzenes	AA-1	<1.1	<1.1	---	---
1,1-dichloroethane	AA-1	<0.2	<0.2	---	---
1,2-dichloroethane	AA-1	<0.2	<0.2	---	---
1,1-dichloroethylene	AA-1	<0.2	<0.2	---	---
Dichloromethane	AA-1	0.40	0.29	0.34	16
1,2-dibromoethane	AA-1	<0.2	<0.2	---	---
Perchloroethylene	AA-1	<0.1	<0.1	---	---
Carbon tetrachloride	AA-1	0.12	0.13	0.12	4.0
Toluene	AA-1	2.34	2.12	2.23	4.9
1,1,1-trichloroethane	AA-1	<0.1	<0.1	---	---
Trichloroethene	AA-1	<0.1	<0.1	---	---
Chloroform	AA-1	<0.1	<0.1	---	---
Vinyl chloride	AA-1	<0.2	<0.2	---	---
m+p-xylenes	AA-1	1.52	1.20	1.36	12
o-xylene	AA-1	0.55	0.42	0.48	13

Four Tedlar bag samples, laboratory numbers 01995-(14-17), were analyzed for SCAQMD Rule 1150.1 components, methane, and total gaseous non-methane organics (TGNMO). Agreement between repeat analyses is a measure of precision and is shown above in the column "% Difference from Mean". Repeat analyses are an important part of AtmAA's quality assurance program. The average % Difference from Mean for 8 repeat measurements from four Tedlar bag samples is 8.4%.

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
BRADLEY	SUNLAND

Project No.	Field Logbook No.

Sampler: (Print)	(Signature)	No. Of Containers
Chris Summerford	CMD	4

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	ANALYSES: TOC	ANALYSES: THC				Remarks
AA-1	7-17-18-05	0900-2100	01995-14	AMBIENT AIR	X	X				1150.1
AA-2	7-17-18-05	0900-2100	-15	"	X	X				
AA-3	7-17-18-05	2100-0900	-16	"	X	X				
AA-4	7-17-18-05	2100-0900	-17	"	X	X				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	7-18-05	12:20		7/18/05	12:20
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
Sample Disposal Method:			Disposed of by: (Signature)	Date	Time

Sample Collector

RES Environmental Inc.
865 Via Lata • Colton, California 92324
(909) 422-1001 Fax (909) 422-0707

Analytical Laboratory

A, T, M, A,

BRADLEY LANDFILL

Data: Wind Direction (16 points)
Station: BRADLEY
Period: JUL, 2005

Clock Time

Date	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	7	7	9	14	11	11	12	9	7	7	7	7	8	6
19	7	7	8	8	6	6	6	7	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-

BRADLEY LANDFILL

Data: Wind Speed (MPH)
Station: BRADLEY
Period: JUL, 2005

Clock Time

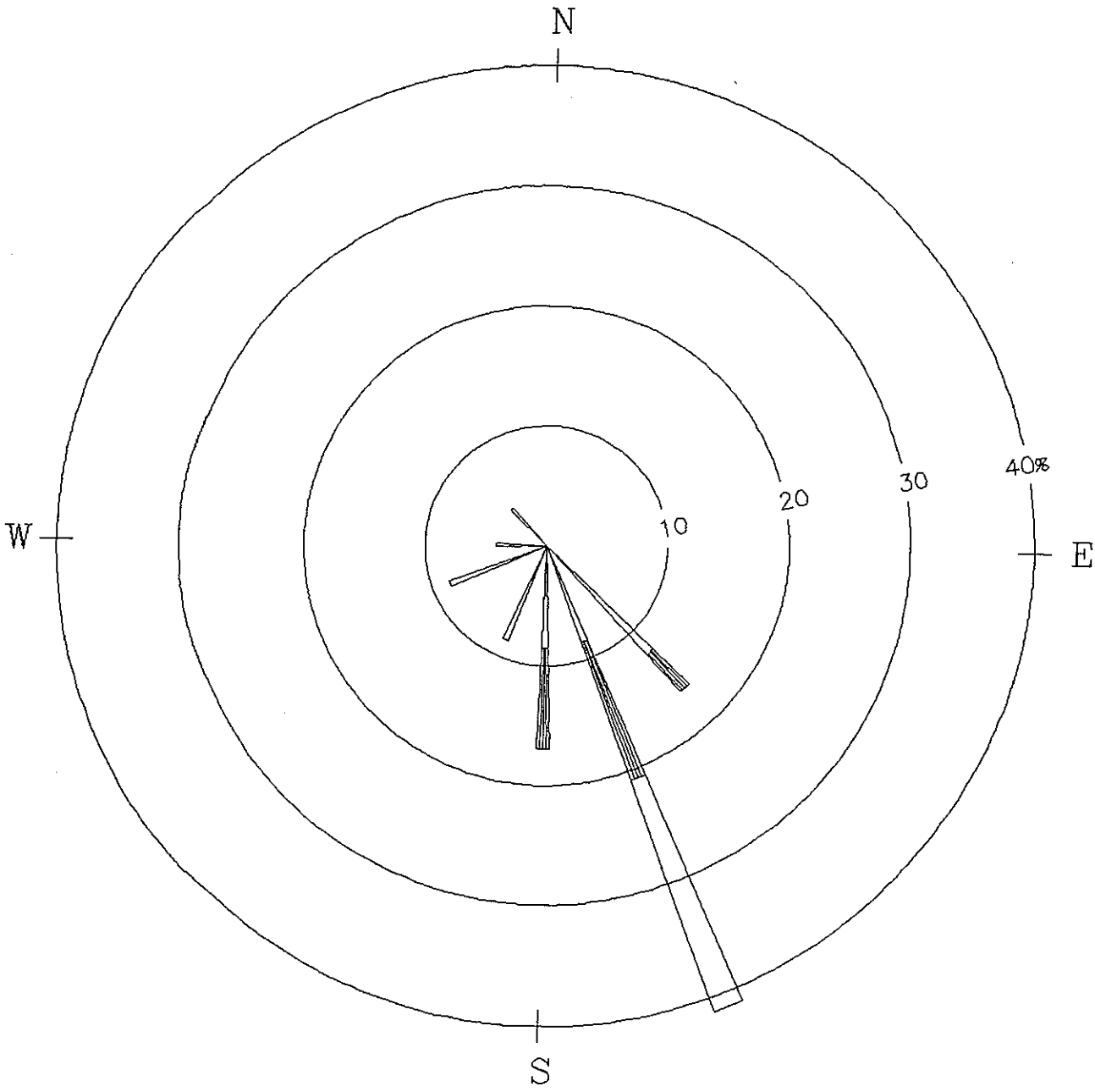
Date	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MAX	HR.	AVE.
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.00
18											10	9	4	5	5	5	4	4	4	4	10	8	6	5	-	0	0.00
19	7	10	4	5	4	3	8	6	7	9															10	10	5.93
																									10	1	6.30
AV	7	10	4	5	4	3	8	6	7	9	10	9	4	5	5	5	4	4	4	4	10	8	6	5			6.11
SD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

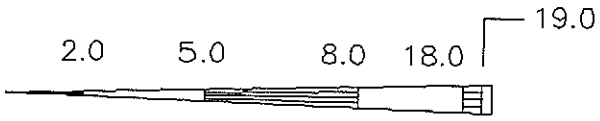
BRADLEY LANDFILL

Data: Wind Rose
Station: BRADLEY
Period: JUL 18, - JUL 19,
Hours: 10 - 09

Wind Speed and Direction
Frequency Distribution

Direction	Wind Speed (MPH) Group 0-2	3-5	6-8	9-18	19+	TOT	%TOT	AVE SPEED
16	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
1	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
2	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
3	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
4	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
5	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
6	0.0	12.0	4.1	0.0	0.0	4.0	16.67	5.00
7	0.0	8.3	12.0	20.0	0.0	10.0	41.67	7.70
8	0.0	8.3	8.3	0.0	0.0	4.0	16.67	5.50
9	0.0	8.3	0.0	0.0	0.0	2.0	8.33	4.00
10	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
11	0.0	8.3	0.0	0.0	0.0	2.0	8.33	5.00
12	0.0	4.1	0.0	0.0	0.0	1.0	4.17	4.00
13	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
14	0.0	4.1	0.0	0.0	0.0	1.0	4.17	5.00
15	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
MSG	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00
TOT	0.0	54.0	25.0	20.0	0.0	24.0	100.00	2.26





WIND SPEED CLASS BOUNDARIES
(MILES/HOUR)

NOTES:
DIAGRAM OF THE FREQUENCY OF OCCURRENCE FOR EACH WIND DIRECTION. WIND DIRECTION IS THE DIRECTION FROM WHICH THE WIND IS BLOWING. EXAMPLE – WIND IS BLOWING FROM THE NORTH .0 PERCENT OF THE TIME.

WINDROSE

BRADLEY LANDFILL
PERIOD: 7/18–19/05

APPENDIX G

TEDLAR BAG QUALITY ASSURANCE AND CONTROL

- Tedlar Bag Checklist

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG #: _____

DATE PREPARED: 7-15-05 PREPARED BY: CMD

SAMPLER #: 3 RUN DATE: 7-17-05

BAG INSTALLATION

BAG INSTALLED BY: CMD DATE: 7-17-05

FLOW READING: 85 cc ADJUSTED ? ( ) NO ( ) OPEN VALVE (✓)

TIME STARTED:

LOCAL 0900

LOCATION: AA-1

BAG REMOVAL

BAG REMOVED BY: CMD DATE: 7-17-05

CLOSE VALVE (✓) FLOW AT END: 85 cc

BAG STATUS: FULL (✓) 1/2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 2100

SAMPLER STATUS: WORKING (✓) NOT WORKING ( )
(specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: CMD

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG #: _____

DATE PREPARED: 7-15-05 PREPARED BY: CMD

SAMPLER #: 3 RUN DATE: 7-17-05

BAG INSTALLATION

BAG INSTALLED BY: CMD DATE: 7-17-05

FLOW READING: 85 cc ADJUSTED ? ( ) NO ( ) OPEN VALVE (✓)

TIME STARTED:

LOCAL 2100

LOCATION: AA-3

BAG REMOVAL

BAG REMOVED BY: CMD DATE: 7-18-05

CLOSE VALVE (✓) FLOW AT END: 85 cc

BAG STATUS: FULL (✓) 1/2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 0900

SAMPLER STATUS: WORKING (✓) NOT WORKING ( )
(specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS: _____

REVIEWED BY: CMD

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG #:

DATE PREPARED: 7-15-05 PREPARED BY: CMD

SAMPLER #: 4 RUN DATE: 7-17-05

BAG INSTALLATION

BAG INSTALLED BY: CMD DATE: 7-17-05

FLOW READING: 85 cc ADJUSTED ? ( ) NO ( ) OPEN VALVE (✓)

TIME STARTED:

LOCAL 0900

LOCATION: AA-2

BAG REMOVAL

BAG REMOVED BY: CMD DATE: 7-17-05

CLOSE VALVE (✓) FLOW AT END: 85 cc

BAG STATUS: FULL (✓) 1/2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 2100

SAMPLER STATUS: WORKING (✓) NOT WORKING ( )
(specify in comments)

BATTERY STATUS GOOD (✓) BAD ( )

COMMENTS:

REVIEWED BY: CMD

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

BAG SAMPLER QUALITY CONTROL

PROJECT/SITE: BRADLEY BAG #: _____

DATE PREPARED: 7-15-05 PREPARED BY: CMD

SAMPLER #: 4 RUN DATE: 7-17-05

BAG INSTALLATION

BAG INSTALLED BY: CMD DATE: 7-17-05

FLOW READING: 85 cc ADJUSTED ? ( ) NO ( ) OPEN VALVE (+)

TIME STARTED:

LOCAL 2100

LOCATION: AA-4

BAG REMOVAL

BAG REMOVED BY: CMD DATE: 7-18-05

CLOSE VALVE (+) FLOW AT END: 85 cc

BAG STATUS: FULL (+) 1/2 FULL ( ) EMPTY ( )

TIME ENDED:

LOCAL 0900

SAMPLER STATUS: WORKING (+) NOT WORKING ( )
(specify in comments)

BATTERY STATUS GOOD (+) BAD ( )

COMMENTS: _____

REVIEWED BY: CMD

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707